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Massachusetts Medical Society

SYMPOSIUM ON TUBERCULOUS CERVICAL ADENITIS.

COMBINED MEETING OF THE SECTIONS ON MEDICINE, SURGERY AND TUBERCULOSIS.
JUNE 10, 1914.

I. Relation of the Tonsils, Adenoids and Other Throat Conditions to Tuberculous Cervical Adenitis. By Geo. L. Richards, M.D., Fall River, Mass.

II. The Treatment of Tuberculous Cervical Adenitis. By Henry D. Chadwick, M.D., Westfield, Mass.

III. The Surgical Treatment of Tuberculous Cervical Adenitis.* By Charles A. Porter, M.D., Boston.

IV. The Treatment of Tuberculous Cervical Adenitis. By John B. Hawes, 2d, M.D., Boston.

V. Tuberculosis From a Dentist's Viewpoint. By George H. Wright, D.M.D., Boston.

I.

RELATION OF THE TONSILS, ADENOIDS AND OTHER THROAT CONDITIONS TO TUBERCULOUS CERVICAL ADENITIS.

BY GEO. L. RICHARDS, M.D., FALL RIVER, MASS.

FOR the proper understanding of this subject a knowledge of the anatomy and of the relationship of the lymphatic drainage of the tonsils, the adenoid tissue and the pharyngeal region to the cervical lymphatics is necessary. Whereas considerable space is given to this subject in various text-books of anatomy, most of it seems to be based on the original work of Sappey, which was done on children many years ago, and that of Poirier, Cuneo, Delamere and Most. It is stated in many monographs on the subject that the tonsils drain into the superficial and deep lymphatics, but I am unable to find any valid, anatomical statement for their drainage into the superficial lymphatics. The superficial lymphatics drain the areas of the anterior part of the mouth and tongue, and then pass into the deeper chain, while all that is posterior, including the entire pharynx, the post-nares, the upper pharynx, the tonsils and the base of the tongue, drain into the deep lymphatics of the jugular chain, of which there are two or three sets.

Briefly, this anatomy is as follows:—There are two principal retropharyngeal glands, one on each side of the median raphe, at the junction of the posterior and lateral surfaces of the pharynx, corresponding to the situation of the arch of the soft palate, with sometimes three or more additional lymph nodes on one side or the other. These glands correspond to the general situation of retropharyngeal abscesses, these being invariably found on one or the other side of the median line. They receive the lymph coming from the mucous membrane of the nasal fossae, and adjacent cavities, and drain into the upper glands of the internal jugular chain, passing behind the vessels and the nerves. The general lymphatic drainage of the pharynx ends either in the retropharyngeal glands or the internal jugular chain. The glands of this chain also receive the lymph from the internal group of the sternomastoid glands. The lymphatics from the tonsil appear to drain into the posterior lymph glands of the tongue, thence into two lateral trunks, thence passing down the lateral wall of the pharynx terminating in large glands of

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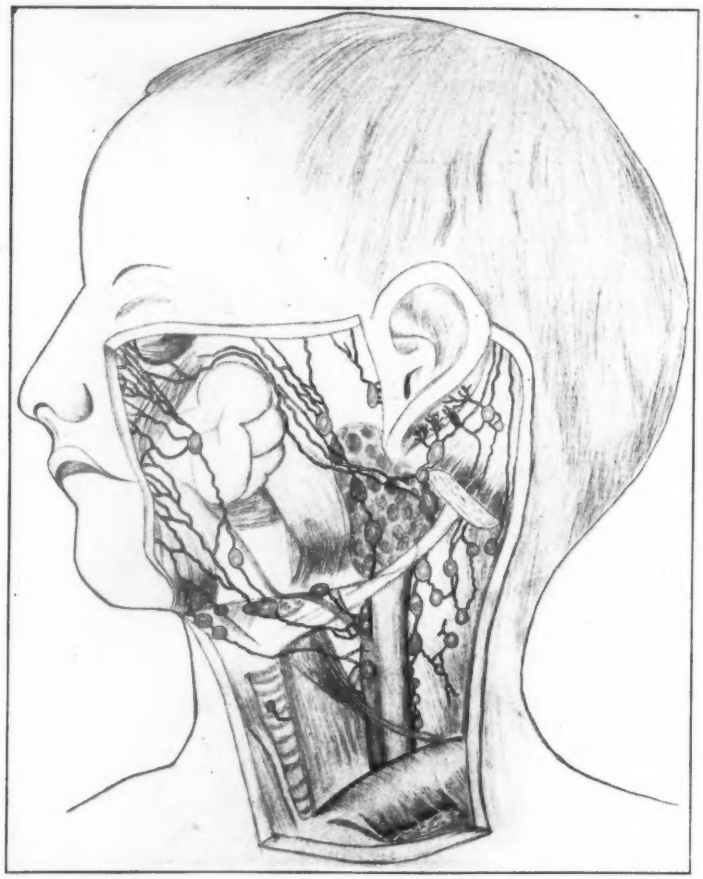

FIG. 1.—General scheme of the lymph-stream of the outer nose, the face and the side of the head, together with the lymphatic gland groups of the head and neck. (After Most.)

the internal jugular chain behind the posterior belly of the digastric. This is the principal meeting place of the neck lymphatics. A not inconsiderable number of the lymph vessels go directly from the posterior pharyngeal wall to the deep glands of the neck and the jugular region. The adenoid area drains into the posterior wall of the pharynx, which is the chief collecting point of the lymphatics of the pharynx both from the roof of the pharynx, and from the posterior and side walls, and from the Eustachian tube. The lymphatics of the larynx drain into the glands arranged along the internal jugular chain, the substerno mastoid glands being the principal terminus. The lymphatic glands of the lung form a rich network joining together up to the point of entrance of the lung where they become superficial. They pass through several pulmonary lymph glands forming by their union broncho mediastinal trunks. These course along the trachea to the lower portion of the neck, and finally open at the venous confluence or into the thoracic duct on the left, and on the right directly into the subclavian, or at the junction of the jugular and subclavian.

The tonsil itself develops as an ingrowth of endothelium from the second bronchial pouch. According to Gordon Wilson, in origin it is in line with the thymus and the thyroid, and is not a pure lymphoid structure. It begins to develop about the fourth month of embryonic life, and matures about puberty. It probably has some protective function in the early years of life as the experimental work performed by G. H. Wright and many others has shown. The argument that because no deleterious results follow enucleation, the tonsil is of no value, and should be removed in every case, is not a good one, since its period of greatest functional activity is before puberty. Tubercular adenitis is usually a localized tubercular affection most frequent in childhood from the sixth to the fifteenth year, although it may occur in early infancy, and seems to have some relationship to diseased tonsils, adenoids and general pharyngeal disturbance. It has repeatedly been demonstrated by Wood and others that tubercle bacilli can be made to invade and pass through the faucial tonsil without producing tuberculosis of the tonsil itself. The same is probably true of other portions of the lymphoid area whose anatomy we have been considering. When we come to estimate the number of cases of tonsils which of themselves are actually diseased, we find the number varying from one or two per cent. up to ten, according to the experience

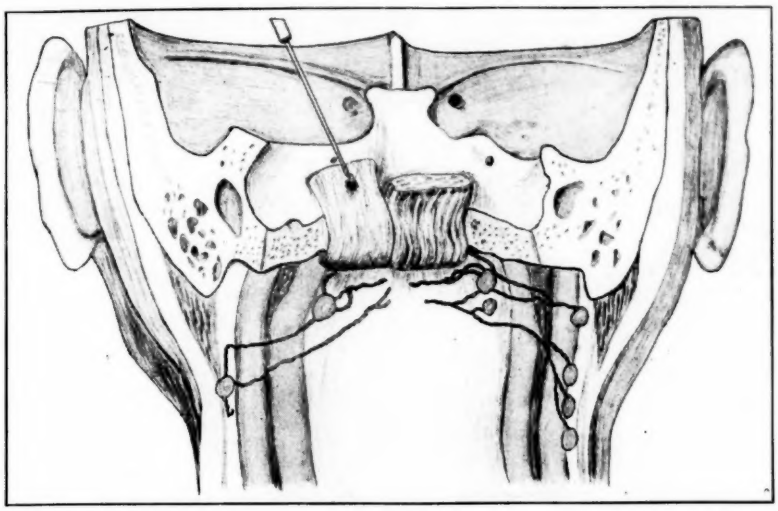

FIG. 2.—Lymph vessels and glands of the retropharyngeal space as seen posteriorly. (After Most.)

of the individual observer. Tubercle bacilli have been extremely hard to demonstrate in the tonsil, hence the question of the presence or absence of tubercular disease has had to depend principally upon histologic findings. A sufficient number of observations have been made to demonstrate that tubercular adenitis is not necessarily accompanied by a tubercular tonsil, but seems to have its source with the tonsils as the port of entrance of the trouble even though they themselves may not have been diseased. In one instance I removed the adenoids in a girl of twelve, some years later she had a severe attack of cervical adenitis, with broken down glands, which on removal, were found to be tubercular. The tonsils were removed at this time, and the individual has been perfectly well ever since. She is a strong and robust woman, and never had any cough. She married, the adenoids were removed from her child, and then this child developed adenitis with broken down glands, but without signs of any general tuberculosis. The glands were removed, and later the tonsils also, with the result that the child is now in perfect health, more than a year having elapsed since the last operation. I do not think there was any direct heredity in this instance, but in each case the infection occurred through the faucial tonsils. Certain it is that after removal of the faucial tonsil in many children previously suffering, to a greater or less degree, from enlarged cervical glands, these glands disappear and are no longer palpable to the finger. In a recent review clinic, held to determine the

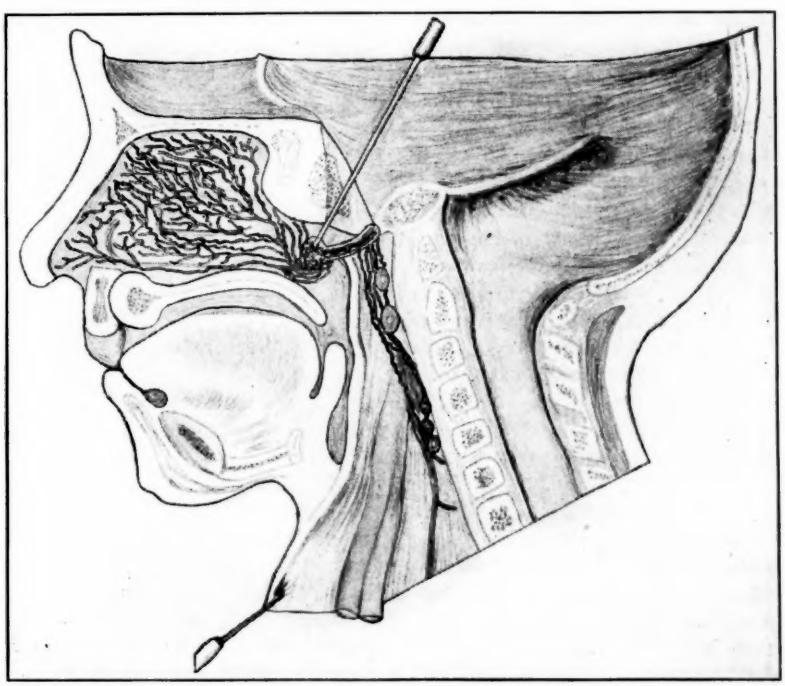

FIG. 3.—Lymph channel of the interior of the nose and the Eustachian tube. (After Most.)

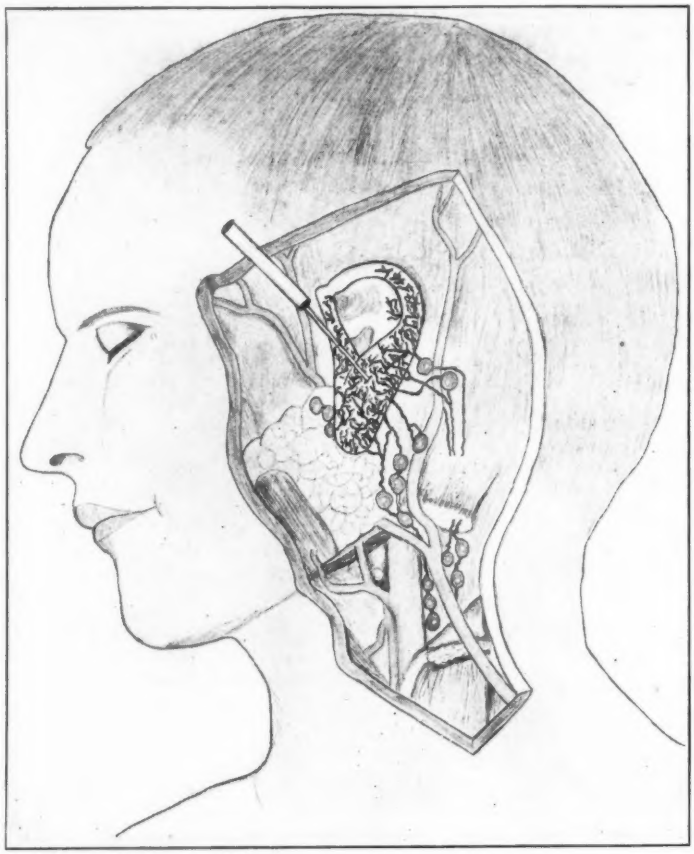

FIG. 4.—Lymph vessels of the external ear and the glands of the same region. In front of the ear are the two anterior auricular glands in the niche between the parotid and the anterior wall of the external canal. Behind the ear are the mastoid glands and below the ear five infra-auricular glands. The deep neck glands along the internal jugular are also shown. (After Most.)

final results, in a series of cases operated on for tonsils and adenoids, something over 100 in number, it was found that the cervical lymph glands, were, as a rule, felt not at all, or to only a slight degree. Many of these children did have enlarged lymph glands at the time of operation. Although it is impossible to determine in the individual case whether the tonsil is the source of the adenitis or whether its removal will cause a disappearance of the enlarged glands, I am inclined as the result of my own experience and that of others, to recommend that in all cases of cervical adenitis the tonsil be removed as the first procedure. If the glands are broken down, and an operation upon them has to be performed, then the tonsil should be removed at the same time. That the removal of the tonsil removes all source of possible danger of infection of the cervical lymph glands is not claimed, since anatomical studies already referred to have shown that the entire area of the middle ear, Eustachian tube, superior, posterior and lateral pharyngeal wall, the tonsils, base of the tongue, and posterior nares all have their lymphatic drainage area into the cervical lymph glands. The tonsil, however, being large, and situated in the back of the mouth where it is very subject to infection and to pressure during the act of eating and swallowing, is probably the greatest offender. As the tonsil is such a possible portal of infection, and as its removal seems to be followed by no deleterious effects upon the organism, and as it is very likely to be a source of entrance for the infection of rheumatism, I should advise its removal in all cases of cervical adenitis, and in all children whose parents give a history of having had cervical adenitis. At the same time, one cannot say with positiveness that the removal of the tonsil will either cure or prevent cervical adenitis. Here, as in other departments of medicine, each case must be judged on its own merits. One can always reassure the parents of such children that in all probability the cervical adenitis is not an accompaniment of a general pulmonary tubercular process, since the lymph glands of the lung drain directly into the blood stream, the drainage from the two areas having no direct meeting-place, unless near the point of final entrance into the general blood stream. It, of course, cannot be denied that there is some possibility of general infection from the entrance into the general blood stream of bacilli from the infected

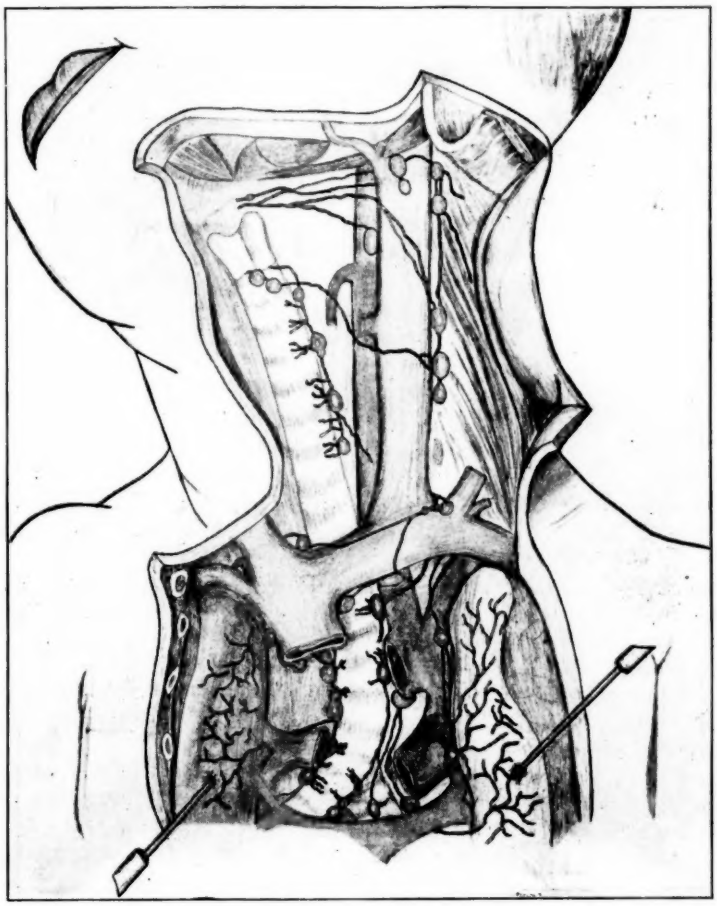

Fig. 5.—The lymph channels and glands in the region of the larynx, trachea and tracheobronchial glands, with their course from the trachea and the lungs. (After Most.)

cervical lymph glands. Practically, however, the process is usually limited to the area involved. It is not probable that all enlarged cervical lymph glands are tubercular, presumably about 80% of them are.

[I have to acknowledge in the preparation of this article my special indebtedness to the volume on the "Lymphatics" of Poirier, Cuneo, and Delamere, and to the articles entitled "Der Lymphgefässapparat des Kopfes und des Halses," by Professor August Most, published in Vol. I "Handbuch der speziellen Chirurgie des Ohres und der oberen Luftwege," edited by Katz, Preysing and Blumenfeld, from which article the illustrations here presented have been redrawn.]

II.

Treatment of Tuberculous Cervical Adenitis.

By Henry D. Chadwick, M.D., Westfield, Mass.

Superintendent, Westfield State Sanatorium.

In March, 1910, a young woman 23 years of age, was transferred from the Massachusetts General Hospital to the Westfield State Sanatorium. One of the assistant resident physicians signed the application blank on which he made this note,—

"Tuberculous cervical adenitis; operation not advisable. Signs of tuberculosis present at right apex."

Briefly the history of the case was as follows:—

The glands of the left cervical region began to enlarge four years ago. Those of the right side two years later. Recently she noticed considerable loss of strength and her weight was fourteen pounds below normal.

Physical examination showed that the anterior, posterior and sub-maxillary groups of glands were all involved. The swelling was so extensive that the neck had lost all its natural contour.

While at the hospital a small gland was excised for examination and a pathologist reported that it was tuberculous.

There was slight consolidation of the right apex, without signs of active disease.

For the first week following her admission, her temperature varied from 100 to 103, and then gradually declined until it reached normal in about six weeks. During this time there had been little decrease in the size of the enlarged glands. After her temperature had been normal

for about a month tuberculin treatment was commenced. The initial amount given was one millionth of a milligram. The dosage was cautiously increased up to a maximum of ten milligrams. The swollen glands steadily reduced in size during the treatment.

She was discharged as a patient in November, 1910. At that time her neck had a normal appearance and only a few of what had been the largest glands could be felt. Her general condition was very good, and she was given work as a ward maid. We continued the tuberculin several months longer, while she was thus employed.

The results in this case were so good that all subsequent patients, as they were admitted, were given tuberculin treatment if they had enlarged glands and their pulmonary disease was not so active as to contraindicate its use. I have had but a comparatively few adults with tuberculous adenitis who were suitable cases for this treatment. Each one has responded satisfactorily to tuberculin, except one out-patient. This woman came for treatment twice a week and continued her usual occupation. Although she came faithfully for the injections until a dose of ten milligrams was reached, there was no apparent decrease in the size of the glands. I am of the opinion that had this patient been under sanatorium conditions while being treated, a satisfactory result might have been obtained.

One other patient had cervical adenitis so extensively that it made operation inadvisable. She had been referred to the sanatorium from the out-patient department of the Massachusetts General Hospital. This girl had been at the sanatorium two different periods for a few months each, and left against advice each time. Tuberculin was given regularly while at the sanatorium, and continued at irregular intervals at the out-patient department of the hospital. In this case much good has been accomplished, but probably some of the larger fibroid glands will later need to be excised.

Another young woman had a marked enlargement of the right posterior cervical group. Some of the glands had become caseous, broken down, and there was a discharging sinus. Four months' treatment with tuberculin was without apparent effect. The enlarged glands were then excised, and the tuberculin continued. The wound healed by first intention. After her discharge as a patient, she worked at the sanatorium for two years as a domestic. Her health was excellent, although at one time a swelling appeared near the sight of the old scar, which, after resuming tuberculin medication, soon disappeared.

Many of the children admitted at Westfield have tuberculous cervical glands. Not many are noticeably large, but they can be readily felt on examination. Almost invariably these children also have enlarged bronchial glands, as evidenced by impaired resonance between the scapulae. As a routine part of their treatment, we put these patients on bacillen emulsion, if they do not have more than a degree of temperature, or other signs of active pulmonary disease.

The initial dose is one millioneth of a milligram, and the course of treatment extends over a period of about six months, until we reach ten milligrams. This maximum could be reached in a shorter time, but I feel that a small dose given over a longer period is more effective, and can be given in this way without causing reactions.

The result of treatment in these children is very satisfactory. The cervical glands decrease perceptibly in size, and the area of dullness over the hilus becomes smaller and less pronounced.

The longer the tuberculous disease has existed in a gland the slower will be the effect of treatment.

Resolution must necessarily be limited if fibroid changes have taken place. Suppuration has not occurred in any case where it did not exist prior to treatment.

One young girl having multiple tuberculous ulcerations of the skin and numerous involved glands showed marked improvement as soon as we began to administer tuberculin. She is still under treatment with every indication that the ulcers will heal and that the enlarged glands will disappear.

In a few instances where patients have developed adenitis while in the sanatorium, we have invariably found that instituting tuberculin treatment will prevent further swelling and cause that which has occurred to undergo prompt resolution.

This experience leads me to the conclusion that surgical interference is only necessary to remove such glands as have become caseous, or fibroid. Extensive dissections are unnecessary in these cases, as the small recently diseased glands that are left will disappear under the influence of tuberculin treatment.

IV.

THE TREATMENT OF TUBERCULOUS CERVICAL ADENITIS.

BY JOHN B. HAWES, 2D, M.D., BOSTON.

I WISH it understood that I am making no special plea for tuberculin in the treatment of tuberculous adenitis. I believe that tuberculin does a certain amount of good in certain cases. With proper handling it does no harm. I also wish it understood that I am likewise not opposed to proper surgery. I feel very strongly that if we could multiply over this country men of the skill and experience in this line of Judd of Rochester, Dowd of New York, and Stone and Porter of this city, we might not need any tuberculin. What I want to emphasize strongly, however, is that surgery in many hands cannot do all we ask of it when dealing with

a tuberculous infection. In every instance the operation, be it large or small, should be regarded as but an incident in a course of treatment, the most important part of which comes before and after the operation; and furthermore, it should be borne in mind that it is a human being and not merely a neck which is being treated. The average doctor cannot do a good disection of the neck; the radical operation, so-called, in most hands is not radical, and often does not cure.

The treatment of tuberculous adenitis has undergone a curious change during the past fifteen years. At first no pathological condition was looked upon as more properly belonging to the surgeon than enlarged tuberculous glands in the neck. The operation for "radical excision of glands of the neck" was a very common one in our hospitals and almost invariably it was entered in the record books that the patient was "discharged cured." It was indeed a curious state of affairs, because in practically no case was the operation radical in the strict interpretation of the word, and, as I believe I can demonstrate, it did not cure in a large proportion of cases, while in many of those in which an apparent cure resulted, large and disfiguring scars remained.

Next, late in the last decade, there swept over this country and Europe a wave of enthusiasm for the use of tuberculin as a cure for all forms of non-pulmonary tuberculosis. Surgery was decried; common sense methods of hygienic treatment were neglected, while many physicians, imbued with the tuberculin idea, became mere "injectors," as Nathan Raw scoffingly calls them. There is no need of dwelling upon the narrow mindedness of this attitude.

Finally, at the present time, a sounder and saner therapy has developed. Surgery, conservative or, in rare cases, radical, depending on the surgeon's skill or lack of it, has its place; tuberculin in some cases does wonders, in others it plays a lesser rôle and at all events, in competent hands can do no harm. Hygienic measures including out-door sleeping, proper diet, exercise and rest, baths and heliotherapy are given their proper place as the basis of all treatment in all forms of tuberculosis while, of the greatest importance, the cleaning up of portals of entry and removal of foci of infection such as carious teeth, diseased tonsils and adenoids are recognized as an essential part of treatment for this condition.

First, as to surgery in tuberculous adenitis, it is evident even to the casual observer, that in this city at least, and I believe elsewhere, the so-called "radical operation" is not performed nearly as frequently as it was ten years ago. The only possible reason for this must be that the result obtained did not justify its continuance. To make a complete dissection of the neck and to remove all traces of diseased glands is a difficult and well nigh impossible task. Were it possible to confine this operation to a few specially trained surgeons in every large city our results might be better; as it is, the operation is looked upon far too lightly and is entered upon without the skill, experience and training necessary for successful results. The tendency for surgeons to become trained and to devote special attention to diseases of one part of the body will, I hope, lead to better conditions.

I am far from maintaining that wholesale removal of glands is not the best procedure in certain instances. Where there are large, discrete isolated masses, without suppuration, a simple incision with removal of these masses *without any attempt* to do a complete dissection is frequently a measure of greatest value. In other less favorable cases, the removal of part of a large mass will often enable the patient to handle the rest of the diseased tissue himself. These operations, however, are not radical ones.

Conservative surgery has a far wider sphere of usefulness. The incision of abscesses and evacuation of pus, the curettage of an abscess cavity and removal of its contents, patient and detailed care in draining sinuses, etc., are regarded as surgical drudgery; careful attention paid to the details of this work, however, play a large part in producing good results.

The use of tuberculin will probably be confined to specialists and will never become common among general practitioners. While among the 250 cases of tuberculous adenitis that have been under my care during the last five years in whom tuberculin has been a part of the treatment, I have met with some discouraging results. I feel that on the whole tuberculin has accomplished a great deal of good and *in no case has done any harm.* The reasons for failure or unsatisfactory results with tuberculin have been chiefly as follows:

a. The length of treatment and consequent effect on the patients who frequently become discouraged and drift away before any results can be expected.

b. Poor general condition of the patient which prevents any response to tuberculin.

c. The presence of active pulmonary tuberculosis. I am unwilling to give tuberculin to such patients except under absolute supervision in a sanatorium or elsewhere.

d. Certain isolated, walled off, discrete masses of glands in adults or young adults. Surgical measures are best for these cases.

Those patients, on the other hand, who have done well with tuberculin or accompanying the use of tuberculin group themselves as follows:

A. A large group of patients who have been operated upon more or less extensively for tuberculous glands. I am firmly convinced as the result of a fairly wide experience in such cases that tuberculin is a great help not only in curing immediate trouble but in preventing recurrences.

B. Patients, adults or children, with discharging sinuses which have persisted in spite of

proper treatment. Tuberculin has been a great help in closing such sinuses.

C. Children with more or less scattered glands, making operation inadvisable, living under proper hygiene, who despite this seem to be at a standstill or to be going slowly down hill and whose glands are gradually enlarging. It is in this class of cases that tuberculin has produced brilliant results.

D. Comparatively rare cases in adults where a large mass of glands, often smooth, hard and immovable, is surrounded by much periglandular tissue. I have not infrequently seen such masses literally melt away under tuberculin.

Finally, I would again emphasize the fact that tuberculin should be looked upon with respect as a potent agent for good or for evil in all forms of tuberculosis. The chief criterion in its use should be not to do harm.

Of hygienic measures little need be said. I may safely take it for granted that the medical profession of this State is fully alive to the fact that not only pulmonary but all forms of tuberculosis demand fresh air day and night, rest and exercise in proper proportions, good food well prepared, baths, and sunlight and all that constitutes what I may call "right living." The care of tuberculous adenitis demands all of these. They are the foundation on which successful treatment rests.

Last, not only in helping to cure, but of more importance, in preventing this condition, the hygiene of the mouth and throat is most essential. Diseased tonsils whether large or small, adenoid growths and carious teeth must receive their due attention. The details of how best to do this may well be left to others better qualified than I.

On closing, two thoughts seem to me to be of prime importance—namely, that the physician remember always that cervical adenitis is but a form of tuberculosis and that he is treating not a few enlarged glands of the neck, but a human being suffering from an infection with the tubercle bacillus.

V.

TUBERCULOSIS FROM A DENTIST'S VIEWPOINT.

BY GEORGE H. WRIGHT, D.M.D., BOSTON.

We have heard the viewpoint of the surgeons and general practitioners, and of course I hear the viewpoint of the nose and throat men every week. The viewpoint of the dentist I think is important in this study inasmuch as most of the children which are treated for cervical adenitis are found between the ages of two and fourteen years.

These drawings* show: (1) A temporary tooth whose roots partially absorbed are in apposition over the crown and mesio-distal side of a permanent tooth. (2) A permanent tooth being undeveloped as to its root, lying beneath this temporary tooth, is easily pressed from above in the process of mastication. (3) A permanent tooth, first molar erupting through the gums approximately at six years of age showing large pulpy mass of embryonic connective tissue showing blood vessels, non-medullated nerves and only partial development of its roots. These states of tooth development are normal and exist through infancy and childhood and up to the time of eruption of the third molars. A consensus of observations find cervical adenitis in humans between two and fourteen years.

There exists a definite anatomical relation between these teeth and cervical glands. As the upper teeth develop we have growth of the face from the floor of the orbit downward, at the same time the face expands laterally. The lower jaw grows backward in the direction of the angle and ramus of the jaw, and subsequently becomes the location for three permanent molars. This growth is influenced through the function of use in mastication and deglutition. In this normal physiological process of growth, bone is formed, absorbed and reformed. Hence the necessity for lymphoid glands, which care for normal physiological waste.

The glands involved in this process are definitely bounded and located within a small triangle anterior to the sterno-cleido mastoid. From the symphysis of the lower jaw at the median line down to upper border of the hyoid bone, then backward and obliquely upward to angle at ramus of jaw with the lower border of jaw as base we have a small triangular area into which drains all material physiological or pathological from the alae nares, the vestibule of the nose, lips, cheek muscles, tissues of the gum, ligaments around the teeth called the peridental membranes, the alveolar process and the jaw bone. This does not include the faucial tonsillar gland, which lies near the anterior border of the sterno-cleido mastoid and is drainage for the tonsil. Having considered these two relations: (1) The mechanical factors of normal eruption with the pump-like action of the pressure of mastication. (2) The anatomical status of the teeth and structures involved in a glandular enlargement within a limited triangular area, we finally consider a third factor influencing the entrance of the tubercle bacilli.

I believe the individual or combined activities of the streptococcus, staphylococcus, or pneumococcus, and occasionally other microörganisms, are the common predisposing factors and almost necessary agents which prepare the tissues and and open a pathway for the subsequent invasion of tubercle bacilli. Such agents we always find in a dirty and diseased condition of the teeth and adjacent structures. This belief is strengthened and confirmed by experimental researches and recent clinical observations.

Cornet (*Journal American Medical Association*, Aug. 6-13, 1910) demonstrated before the tenth meeting of the German Surgical Society

* See Lee, BOSTON MEDICAL AND SURGICAL JOURNAL, May 2, 1914.

that he could produce tuberculosis of the cervical glands by inoculating pulps of teeth through artificial cavities of animals. Then obtained the same results by rubbing cultures of the tubercle bacilli between the lower incisors, root and alveolar process.

Baumgarten (*Journal American Medical Association*, Aug. 6-13, 1910) fed animals on tuberculous material. In every case produced tuberculosis of cervical lymph glands and found an involvement coincidently of the tonsils.

Odenthal (*Journal American Medical Association*, Aug. 6, 1910) found in 131 cases of caries of the teeth a glandular enlargement on one side only and that associated with the teeth.

Reese tabulated 13,167 children, 80% with carious teeth.

Stark (*Britr. Z. Klei. Chir.*, xvi) examined children with cervical lymphadenites, 80% with carious teeth; 16% of the 80% with hereditary predisposition to tuberculosis, 41% of the 80% no other cause than carious teeth. Average age, eight and one-half years.

Morelli and Jaruntowski (*Zahnartzl. Wochnbl.*, viii, 3701) demonstrated tubercle bacilli in carious teeth of patients suffering from phthisis.

Hoppe found tubercle bacilli in carious teeth of otherwise healthy patients.

The possibilities bound up in the microorganism streptococcus when it leaves one live body to continue its growth in another are enormous. This bacillus alone is capable of lowering the vitality of the tissues and through its hemolytic action on the blood and adjacent structures to render a pathway for the invasion of tubercle bacilli a simple matter, and although at times the streptococcus may be harmless it posseses the alarming capacity through transmutation of becoming a most virulent germ. As to whether it becomes harmful or not appears to depend on its environment and oxygen supply.

For example:—

An abscessed root of a tooth with a confined gangrenous pulp and necrotic area of alveolar process deep down below the surface of the gum, would favor the growth of the virulent type of pus-forming streptococcus through lack of oxygenation of the parts, whereas such microorganisms might be recovered from the surface mucosa of the mouth, and on cultivation and inoculation show the harmless variety by comparison. It is a localized hemolysis that has prepared a favorable pathway for the subsequent invasion of the tubercle bacilli through the structures described, into lymph spaces not definitely defined by endothelial walls, thence into the true lymph vessels and finally into the cervical glands. I believe this is the mode of entrance for toxins into the system, as manifested in arthritis, when associated with infection from the teeth, albeit the local glands are not involved or enlarged.

A word relative to the discussion by Dr. Chadwick: We consider all tuberculous patients poorly equipped unless they are surgically clean as to teeth and alveolar process and decidedly handicapped when unable to properly prepare food for assimilation without teeth with which to masticate; if not by natural means then substitutes should be provided. We believe every institution for the treatment of tuberculous diseases should include a proper care of the teeth and mastication.

Summary.—We have shown the anatomical relation between teeth and glands. (2) A mechanical factor, influencing the pumping into the adjacent tissues of debris through loose teeth and mastication. (3) A prepared pathway and open door for the entrance to glands of tubercle bacilli by the localized hemolysis of tissues through the action of the streptococcus and other bacteria.

DISCUSSION.

A. N. Broughton, M.D., Jamaica Plain, Mass.: Dr. Porter has stated, in a very large measure, what I believe about the subject under discussion. When I was at the hospital here we had the régime where nearly all the men did a complete dissection of the neck for tubercular adenitis. Those were the days in which we had extensive, mortifying, and disfiguring scars very commonly. When I got out of the hospital, I found it an imperative thing to clean up the neighborhood in which I lived of tonsils and adenoids. In the first ten years, I did a considerable number, thinking that all large tonsils and adenoids needed operation. The same thing applied to tubercular glands. In later years, not because I have cleaned up the neighborhood entirely, I have operated more and more sparingly on glands, tonsils, or adenoids.

My attention was called to the relation between the teeth and the tonsils by Dr. Wright's work, of which he will speak later. In a reprint of his and Dr. Cobb's, I got my first suggestions as to the relation between those structures. I have come to believe entirely in the theory that the enlargement of tonsils alone is not an indication for operation.

In the cases of cervical adenitis, I notice that most of the men who have spoken have grouped them very largely as tubercular, even if they were not demonstrable as such, and I agree that a large percentage of them are tubercular and of the bovine type, even when a tubercle cannot be pathologically demonstrated. I believe that the thing of the utmost importance to do first is to get rid of the focus. It seems to me foolish to operate on the glands of the neck and leave a source of infection in the throat. Having gotten rid of the tonsils or adenoids which are infected or the carious teeth, the next problem is a very considerable one, and I agree with Dr. Hawes, as well as Dr. Porter, in believing that in all cases a most thorough and comprehensive anti-tubercular treatment should be faithfully tried until it is perfectly clear that the glands will not quiet

down. If they do not, after an extended trial, I believe in operating. Even then, I think it wise to get out with as little disturbance of the glands as possible.

Judd's statistics, of which Dr. Porter spoke, are interesting. There is one paragraph in which Judd states that a very large number of glandular enlargements disappeared after they cleared up the tonsils and teeth, which were the sources of the enlargement, without coming to radical operation. This goes hand in hand with his statement that if you were to examine a very large number of children under fifteen, in a majority of cases you would find a distinct glandular enlargement. So that although Judd reports over 600 cases as operated, it is obvious that many more were not operated excepting to remove the tonsils or adenoids. In other words, apparently, they believe at Rochester that the thing of first importance is to remove the source of the infection, and that a large portion of the glands will quiet down of themselves after that.

I want to call attention to the statement of Dr. Richards in relation to operating on children for tonsils and adenoids, where the parents have been tubercular. It seems to me it would be a mistake to do that commonly. You cannot get away from the fact that if you take away a healthy tonsil, you are removing one line of defence. When those defences have lost their value, it is right and proper to remove them. But to anticipate and operate on an otherwise healthy tonsil merely because the parents have been tubercular seems to me far too radical. It goes without saying, that at the first sign of infection, they should be operated.

I think there is a distinct choice as to the right time for operating even on the tonsils and adenoids. Where the glands are enlarged and are about ready to break down, by operating one throws an additional burden upon the glands and increases the amount of septic absorption and hastens their breaking down. If possible, I like to do a tonsillectomy when the glands are receding, or before they are at all near the breaking down point. Again, in these cases I would emphasize the need of a faithful anti-tubercular treatment before deciding that it is necessary to operate. In this respect, many of the good results of Dr. Chadwick's cases, I believe, were not alone due to the use of tuberculin, which he emphasized, but also to another advantage, which he did not speak of, the very efficient anti-tubercular treatment that they had in other respects. My experience with tuberculin has been smaller than any hospital practice would give, but I think it is one of the agents which in carefully selected cases very materially helps.

As to mortality in a radical operation, I do not think that ought to weigh in the scale, materially. There should be, roughly speaking, little or no mortality. I doubt if it is a question of that nearly so much as a question of scar and the dread, not of recurrence, but the growing of smaller glands which were overlooked. I do not care how careful the dissection is, it is surprising how many small glands will be found to be somewhat enlarged, even shortly after the operation. Those glands were simply overlooked at the time of operation.

The cases of tubercular adenitis that are under two years of age I believe to be more serious than in older children. It is much harder to take care of them by any anti-tuberculous treatment in my experience, and I consider them very grave cases for prognosis.

D. CROSBY GREENE, M.D., Boston: I was interested in seeing the drawings of Professor Most, because there is an article which he published five or six years ago which is of some moment as bearing upon the discussion this afternoon. He at that time made a series of injections to determine the foci of infection of cervical tuberculous glands. He published the results of these injections, which were somewhat as follows: A large majority of the afferent lymph channels of these glands were traced somewhere in the tonsillar region, the region of the pharyngeal tonsils. The proportion was about 70%. A surprisingly large proportion, 13% as I recall it, was found to derive its infection from sources which were near the surface of the skin. These places were the point of juncture between the skin and mucous membrane at the corners of the mouth, at the entrance into the nose and at the margin of the eyelids. In about 13% of the cases, which numbered over 100, the infection was traced to these superficial places on the face. The remainder of the cases apparently were infected from the teeth and other places inside the mouth.

Dr. Porter has said that it is up to the throat men to arrive at some unanimity as to whether a tonsil is the source of infection or not in a given case; that in a given case we should learn whether a tonsil is tuberculous or not. This is a very difficult proposition. We know in the first place that the presumption is in favor of the tonsil as the portal of entrance for infection. We know also that in a very large proportion of tonsils in cases of tuberculous adenitis it is impossible to find evidence of tuberculosis either by microscopical examination or by bacteriological examination or by injection. In my own experience (I have not tabulated the cases) I have had examinations made in a great number of cases and the results have not been at all definite. In some cases of tuberculous adenitis, tubercle bacilli have not been found in the tonsils. In some cases we very often got no evidence of tuberculosis in the tonsils. In other words, the tubercle bacilli can make their way through a tonsil into the gland without leaving any trace in the tonsil itself in the way of tuberculous disease of the tonsil or even without the presence of the bacillus of tuberculosis. There are, of course, cases in which it is possible to make the diagnosis of tuberculosis of the tonsils, but I be-

lieve such cases are extremely rare. Cases in which a distinct lesion, which can be classified as being a tuberculous lesion of the tonsil, are so rare as to be negligible. I have not seen more than two in my experience. I believe they must be very rare. These are usually cases of tuberculous ulceration of the tonsil, which do not constitute any considerable portion of the cases under consideration.

JAMES S. STONE, M.D., Boston: It is important to recognize that by no means all glandular swellings in the neck are tuberculous. Comparatively few of the sudden, acute, painful swellings are of this character. The location of the swollen glands gives some indication of the nature of the infection. In determining the primary focus from which the cervical glands become infected, certain anatomical points are of great help. If a line is drawn vertically upward from the middle of the auditory canal, roughly speaking any infection in front of that line and above the outer corner of the eye may lead to involvement of the preauricular glands; any infection on the face below the outer corner of the eye but above the outer corner of the mouth may involve the glands which are in front of the angle of the jaw close to the groove in which the facial artery can be felt; any infection below the corners of the mouth may involve the submental glands; any infection behind the line drawn upward from the middle of the auditory canal drains back into the posterior group of glands. These simple guides, though not strictly correct anatomically, serve as a good clinical working basis. The lymphatics of the throat, the nasopharynx and the tonsils, drain into the deep glands which lie behind the angle of the jaw and under the middle of the sterno-mastoid muscle. The lymphoid tissue of the naso-pharynx is without question the most common point of entry or seat of primary infection in cases of tuberculous cervical adenitis. But neither the gross appearance of the tonsils nor the clinical manifestations of adenoid hypertrophy bear any constant relation to the severity of the infection of the cervical lymphatics. The lymphatics from the tonsils pass a little further forward, nearer the anterior edge of the sterno-mastoid muscle, than do those from the posterior pharyngeal wall or the Eustachian tube, which may lead into glands near the posterior border of the sterno-mastoid muscle. The glands involved in infections of the middle ear usually lie behind the sterno-mastoid.

These definite anatomical groups of glands give us a clue as to the source of the infection. Cervical adenitis is always a secondary infection. There must be some point of entry from which the infection starts. This point of entry is not always evident when we see the enlarged glands. The original source of infection may be healed. Moreover, a relatively normal tonsil may allow the passage of tubercle bacilli through it and not itself become infected. It is sometimes impossible to tell whether a tonsil is or is not infected. If the tonsillar group of glands is infected, even though no primary source of infection can be found, it must be assumed that the tonsil is not normal and ought to be removed, even though it shows no sign of disease; because the evidence is practically overwhelming that it has been the point of entry and may still contain the focus of infection.

No mention has been made of something which frequently occurs after complete enucleation of the tonsils. I refer to the development of lymphoid tissue along the posterior pillars of the fauces. Since complete enucleation of the tonsils has become common, we are, I think, beginning to see more and more retro-pharyngeal adenitis. Frequently I have seen lymph nodes, and have at times dissected out tuberculous lymph nodes, at the point of the posterior pharyngeal wall which comes in view as you look in underneath the soft palate. Within the last few months I have seen more such cases of lymph node infection in that region than before. I think this is in part due to the development of the lymphoid tissue, which seems to take the place of the enucleated tonsils. This reformation of lymphoid tissue should make us conservative and not allow us to yield without reason to what is becoming a common request of parents, that the tonsils and adenoids be removed because a child has occasional or even frequent colds.

In addition to recognizing that lymphadenitis is a secondary infection, and recognizing the importance of removing the primary focus, we must remember that hygienic treatment is of supreme importance both before and after operation. In that I would agree absolutely with Dr. Hawes. Dr. Chadwick mentioned the importance of sanatorium treatment, making the very suggestive statement that the cases in which he had failed with tuberculin were out-patients at his sanatorium, where he could not give them the out-door hygienic care.

Dr. Porter spoke of three groups of cases. The first included babies under two years of age. I feel very strongly that these are among the most serious cases with which we have to deal. A child under two years who develops tuberculosis has little resisting power, or a very serious infection, is a poor risk. They have no business to develop tuberculosis at that age. If they develop it, whether they are treated medically or surgically the risk is great. In each individual case the treatment must be outlined according to circumstances. If the only important focus is in the cervical glands, that ought to be treated surgically. If the cervical adenitis is only part of a general tuberculosis, then surgical treatment is a minor consideration.

The second group mentioned by Dr. Porter included the cases coming on in older children. He mentioned the difference between the cases

of lymphadenitis in children and the cases which occur in adults. I think that there is a very definite basis for the difference. In children the vast majority of the cases of lymphadenitis occur in the tonsillar group right under the middle of the sterno-mastoid muscle. I feel that the bulk of those cases are of the bovine type, and that the liberal milk diet of children is a great etiological factor in those cases—a bovine infection, tuberculous milk, the bacilli entering through the tonsils and spreading to the glands.

In the third group, including adults, the cases resemble somewhat those seen in babies. The infection is more frequently of the human type, and often the lymphadenitis is only a part of a general tuberculosis. The source may not be directly from the tonsils; it may not be directly from the lungs. These patients have a lowered resistance to the tubercle bacillus. The infection may involve chiefly lymph glands, or may involve any organs of the body. In those cases where the infection spreads from one group of lymph glands to another the fact that any particular glands are affected does not mean that the source is in the region from which the lymphatics enter the particular glands, but that there is a systemic infection, the involvement of the lymph glands being an incident.

Dr. Hawes says he holds no brief for tuberculin. I hold no brief against tuberculin. Many swollen glands subside while being treated with tuberculin, as they do under other methods of treatment. The much despised poultice used to be a favorite treatment. A flaxseed poultice will do one of two things. It will either, if it is possible to bring about resolution, hasten this, or if the disease is so advanced that this is impossible it will hasten breaking down. It will make the glandular condition declare itself. It will clear up a condition in the same way that Dr. Hawes says tuberculin clears it up. These are the cases where good surgical judgment is necessary. If one objects to the term poulticing as being old-fashioned, it may be called inducing hyperaemia.

Cases of tuberculous lymphadenitis should be treated either as glands or as abscesses. I feel more and more that no middle ground is tenable. We ought to excise glands or open and treat abscesses. If enlarged glands have persisted for a material length of time and are not subsiding within a couple of months, then those glands ought to be removed surgically, provided there are not complications which render this unwise. If the adenitis is only a complication of a medical tuberculosis then we must treat each individual case on its merits.

In children the removal of the glands and of the primary trouble in the vast majority of cases cures the infection once and for all. The cause must be removed. If we cannot treat the glands as glands and remove them, then they should be treated as abscesses. A question is very commonly asked by parents and by patients today; one put in their mouths by the medical men of an earlier generation. "Is it ready to open?" That question is most pertinent. The best results in treating abscesses can be obtained by letting the glands thoroughly soften down, become thoroughly walled off, not by a firm fibrous capsule, but by a zone of inflammatory tissue. Let the abscess come near to the skin, but not involve the skin, for skin involvement means slow healing and disfiguring scars. Then when the glands have formed an abscess it can be drained, the tuberculous material can be thoroughly removed by curetting and wiping out with gauze. The best results can be obtained by a thorough, careful, painstaking cleaning out of the abscess cavity, followed by packing lightly but thoroughly into every recess of the cavity with gauze. The gauze may be left untouched for a period of four or five days, or even a week. It may smell bad, it becomes saturated with pus, but during this time there has been opportunity for the inflammatory wall around the outside to throw out granulation tissue. The wick at the end of five or six days may be removed and nothing replaced. Very frequently an abscess so treated will heal immediately and give no further trouble. In this way the constant dressings, which to children especially are terribly trying, with the frequent packings, cauterizations, and the long drawn out treatment of sinuses, may be avoided.

The cases in which some glands are only just becoming caseous, while others have been completely destroyed and formed abscesses, are those in which the skilled judgment of the surgeon is necessary if a satisfactory outcome is to be obtained. Fortunately we see today in the hospitals much less severe cases than were formerly common. Patients seek treatment earlier.

One thing in regard to the scars is important. A line of incision along the skin fold of the neck gives a trifling scar. But if the incision is long it is absolutely essential that the platysma which lies at right angles to the line of the skin folds of the neck should be stitched, because if this is not stitched then the line of the scar inevitably spreads.

It is most important to visualize as clearly as possible the entire pathological process. If the complications or the general health of the patient are the chief factor the treatment of the glands themselves becomes a matter of comparatively little significance. When, however, the glands are the chief manifestation of the tuberculous process, one should picture clearly exactly the condition of the glands. When the infection first begins there is swelling due to congestion and edema. This at first is confined to the glandular structure alone, but if the process is severe it very soon spreads into the peri-glandular tissues. The spread into the peri-glandular tissue is what brings on pain on movement and the ordinary symptoms of a stiff neck. There

may be hyperemia and swelling of the glands and also peri-glandular inflammation without the process going on to caseation. If, however, the process continues long, a caseous destruction in the central portion of the gland is inevitable. This may occur in one or in many foci within the glands, but for a long time there may be a considerable amount of glandular tissue left intact.

Sometimes before the destruction of the glandular tissue has become complete, the disease may spread through the capsule into the surrounding tissues. In other cases where the process is more slow the destruction of the gland goes on so quietly that the process is entirely confined within the capsule. The spread of the caseous process into the peri-glandular tissues renders the formation of an abscess certain. This process spreads in the soft parts until it reaches the skin, then it involves the skin, finally perforates the skin, and a fistula becomes established, which may or may not heal, according to the resistance of the patient and the particular conditions existing in the course of the fistula. If the caseous process is confined within the capsule of the gland, then for an indefinite time, even for many years, there may remain a tuberculous cyst in which the organisms may be dead—or at least are absolutely quiescent—until something in the general condition of the patient or some local trauma lights up the process again.

With a mental picture of the pathological process clearly in mind, the surgeon should decide whether he can aid nature by eradicating the disease or whether he can better and more safely aid nature by simply hastening a destructive process which ordinarily is slow and tedious; but the surgeon should have an opportunity to decide sufficiently early to be given a choice.

Original Articles.

VISCERAL PTOSIS. A REVIEW.*

By John T. Williams, M.D., Boston,

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The subject of visceral ptosis is exceedingly complicated, ptosis being not a local process, involving one or a few organs, but part of a much more general condition, involving not only the abdominal contents, but the musculature and bony framework of the body as well.

Although the clinical picture of enteroptosis was clearly described by Glenard[1] in 1885, failure to recognize the general nature of the condition has been responsible for almost uniform failure of all methods of treatment. The work of recent writers, especially Goldthwait,[2] Martin,[3] Smith,[4] and Coffey,[5] has resulted, however, in a clearer understanding of the subject.

It is my purpose to review briefly our present knowledge of the mechanics, causes and symptoms of visceral ptosis and to set forth with a little more detail the varying ideas as to its treatment.

Clinical Appearances. The clinical appearances are easily recognized by the characteristic ptotic figure. The attitude is that of physical weakness. The individual is round-shouldered and flat-chested, standing with the head drooping and arms hanging in front of the center of gravity of the trunk. The waist line is high, the lower abdomen protuberant, giving in uncorseted women not infrequently the appearance of pregnancy. The costo-vertebral angle is more acute than normal. The lumbar curve of the spine is usually obliterated, giving rise to the straight back, although occasionally the lumbar curve is exaggerated to the point of lordosis. The muscular development is below par and the patient is usually thin and anemic.

Closer observation shows that the abdominal cavity is narrower above than below, because of the flattened chest and straight spine. The pelvic inclination is much diminished, the sacrum being perpendicular and the lower border of the symphysis pubis sometimes at a higher level than the coccyx. As a result of this, the axis of the pelvis is continuous with that of the abdomen, instead of forming an angle with it, as normally.

Gynecological lesions are rather common, not as a direct result of the prolapse of the abdominal viscera but of the patient's general lack of tone.

Anatomy. In order to fully understand the anatomical conditions present in ptosis, it is necessary to review the differences in development between man and the quadruped. In the quadruped, it will be remembered, all the intraperitoneal viscera are freely movable and equipped with a mesentery.

In man, on the other hand, certain changes in development take place in order to furnish additional support to the abdominal organs, necessitated by the erect posture. Briefly stated these are:

1. Fusion of the liver with the diaphragm.
2. Retro-peritoneal fixation of the duodenum and pancreas by obliteration of their mesentery.
3. Adhesion of the ascending and descending colon and mesocolon to the posterior parietal peritoneum.
4. Adhesion of the transverse colon to the great omentum.
5. Fusion of the anterior and posterior layers of the great omentum.

The separate means of support of the individ-

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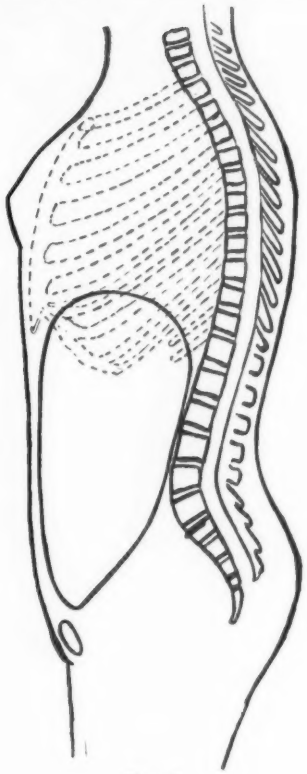

FIG. 1.

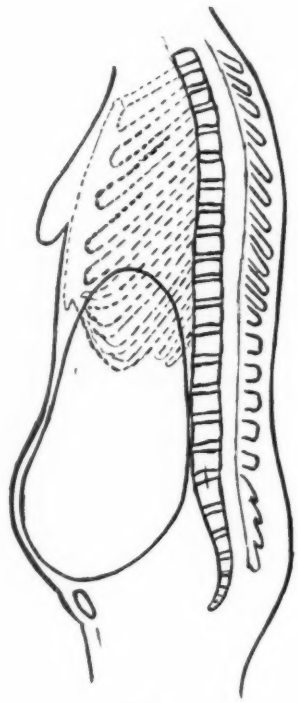

FIG. 2.

FIGS. 1 AND 2.

Showing the differences between the normal figure (1) and the ptotic figure (2). In the latter, note the protuberance of the abdomen; its greater width below than above; the absence of an angle between abdominal and pelvic cavities; the diminished pelvic inclination; the straight spine; flat chest; and the more acute costo-vertebral angle.

ual organs are as follows: The posterior half of the liver is fused with the diaphragm, the ventral half being supported by the falciform ligament. The cardiac end of the stomach is firmly fixed by the esophagus and gastro-phrenic ligaments. The remainder of the organ is suspended from the under surface of the liver by the lesser omentum, which is thickest at its free border, where it contains the vessels going to the liver and the bile ducts. The pancreas and duodenum are retroperitoneal and firmly attached to the vessels in front of the vertebral column.

The duodeno-jejunal angle is supported by the muscle of Treitz, which runs to the left crus of the diaphragm. The small intestine is freely movable, being attached to the posterior abdominal wall by its mesentery, which is shortest near the termination of the ileum. The cecum and ascending colon are adherent to the posterior abdominal wall, their mesentery having become fused with the posterior parietal peritoneum. The hepatic flexure receives support from the liver by the hepato-colic ligament. According to Longyear, it is also connected with the right kidney by a firm band of fibres, but this offers no support to the colon because the right kidney is the least firmly supported of all the abdominal organs.

The transverse colon is suspended from the stomach by the gastro-colic omentum and indirectly from the diaphragm through the liver, lesser omentum and stomach. The splenic flexure is the most firmly supported point of all, being held in position by the gastro-colic and gastro-splenic ligaments. The descending colon is also firmly attached to the posterior abdominal wall by fusion of its mesentery with the posterior parietal peritoneum. The sigmoid has a short mesentery.

The kidneys are retroperitoneal, surrounded by a fatty capsule, and undoubtedly derive more or less support from the parietal peritoneum and the layers of the fused mesentery of the ascending and descending colon.

In addition to these direct supports which we have described, there are two important factors in maintaining certain of the abdominal organs in place. The first of these, the backward pressure of the abdominal wall, is sufficiently obvious.

The second was pointed out by R. C. Coffey.[5] If we look at a sagittal section of the normal body (Fig. 3), we observe that the kidneys are situated in the lumbar fossae, behind the peritoneum, and back of the line of downward pressure on a sort of shelf formed by the lumbar curve of the vertebral column and the psoas muscle. This shelf makes an angle of 51° with the horizon and undoubtedly plays no small part in the retention of the kidneys in normal position.

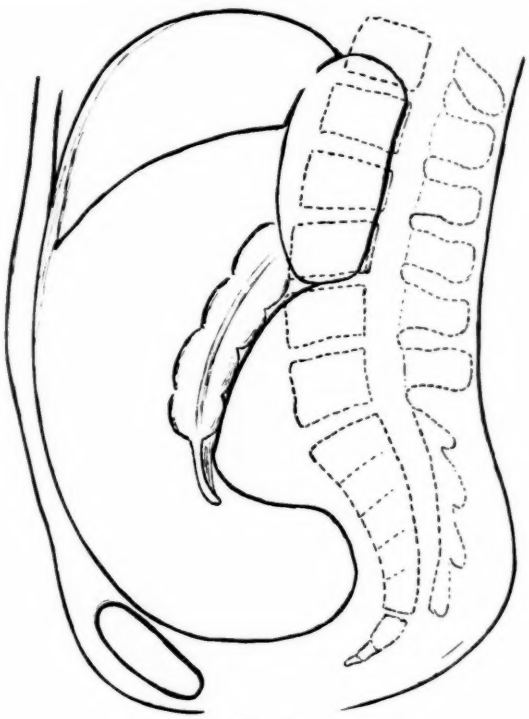

FIG. 3.

Showing the kidney shelf formed by the psoas magnus muscle with the lumbar curve of the spine.

Goldthwait lays considerable stress on the importance of the cervical fascia, which through its continuation, the pericardium, forms a suspensory ligament for the diaphragm. He has demonstrated that putting the cervical fascia on the stretch by throwing the head backward will raise the stomach three to four inches.

The most firmly supported points in the visceral tract are the cardiac end of the stomach, the splenic flexure of the colon, the pylorus and the duodenum. The least firmly supported points are the stomach between its two extremities, the cecum, ascending colon, hepatic flexure and transverse colon. For this reason prolapse of the right kidney occurs early in the process, and is extremely common. Prolapse of the left kidney, on the other hand, is found only when the splenic flexure, the most firmly supported point of the intestinal tract, gives way, and is indicative of the most complete form of ptosis.

Looking at the support of the abdominal viscera from a slightly different point of view, we see the cervical fascia, attached above to the base of the skull, continued downward as the pericardium, giving support to the dome of the diaphragm. From the diaphragm is suspended the stomach by means of the liver and lesser omentum; and from the stomach, the transverse colon by means of the great omentum. In the round-shouldered stooping attitude there is lack of tension on the cervical fascia, dropping of the dome of the diaphragm, and therefore prolapse of the stomach and transverse colon, aided, of course, by the relaxed abdominal muscles, flabbiness of the omentum and atony of the muscles involved. This constitutes mid-line ptosis.

The support of the right kidney is intimately associated with that of the hepatic flexure of the colon, as we have seen, and therefore prolapse of the kidney is always associated with ptosis of the hepatic flexure and ascending colon and cecum mobile. This constitutes right-sided ptosis. These two forms of ptosis may be associated or occur separately.

Two conditions must be mentioned which are frequently associated with visceral ptosis, namely, Lane's[6] kink and Jackson's[7] membrane. There is wide variation of opinion as to whether these are directly concerned with the ptosis or are merely coincidences.

Lane[6] himself considers the ileal kink the result of ptosis of the cecum, with the resulting crystallization of the lines of strain into peritoneal adhesions. Coffey,[5] on the other hand, believes Lane's kink to be due to chronic inflammation not associated with ptosis.

Regarding the etiology of Jackson's membrane, there is again divergence of opinion. Jackson[7] supposed the condition due to infection from within the cecum. Mayo[8a] believes this membrane formation to be the result of late rotation of the colon, and descent of the cecum from its hepatic position after formation of the posterior parietal peritoneum. In this event the cecum burrows its way into its position in the right iliac fossa, investing itself with an extra layer of peritoneum, which ultimately becomes the pericecal membrane. Lane[6] ascribes the pericecal membrane to the same causes as the ileal kink, namely, the development of peritoneal adhesions to resist the prolapse of the cecum.

Etiology. The causes of ptosis generally agreed upon are:—

1. Defects in development.
2. Faulty attitude.
3. Deficient musculature.
4. Rapid loss of flesh.
5. Repeated pregnancies.

It is probable that none of these causes alone is ever responsible for prolapse of any of the viscera. Certain individuals seem to be predisposed to ptosis by hereditary peculiarities of physique or congenital defects in development. The flat chest and straight spine may be inherited. Among the congenital defects in development which have been noted are:—

1. Failure of the colon to rotate completely into the right flank and carry its mesocolon across the front of the right kidney, depriving that organ of one of its most important means of support.

2. Failure of complete fusion between the right meso-colon and the posterior parietal peritoneum, resulting in cecum mobile.[9] This occurs in 20% of all individuals.

3. Failure of the layers of the great omentum to fuse, allowing prolapse of the transverse colon.

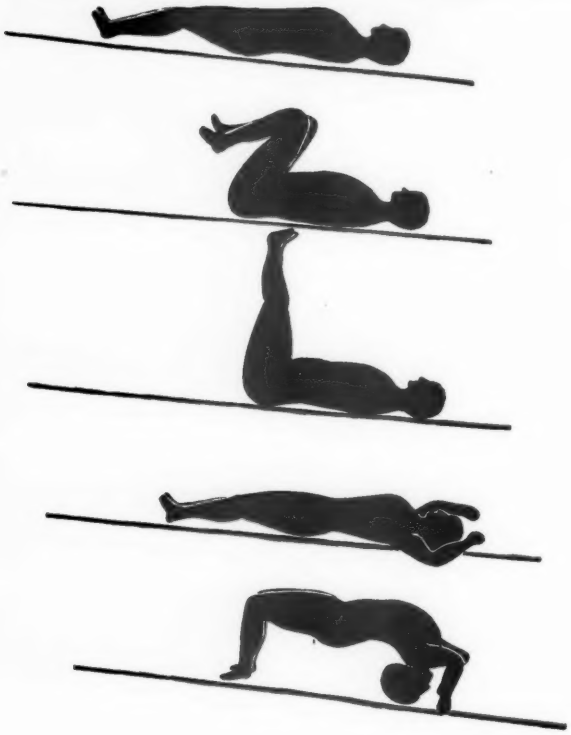

FIG. 4.

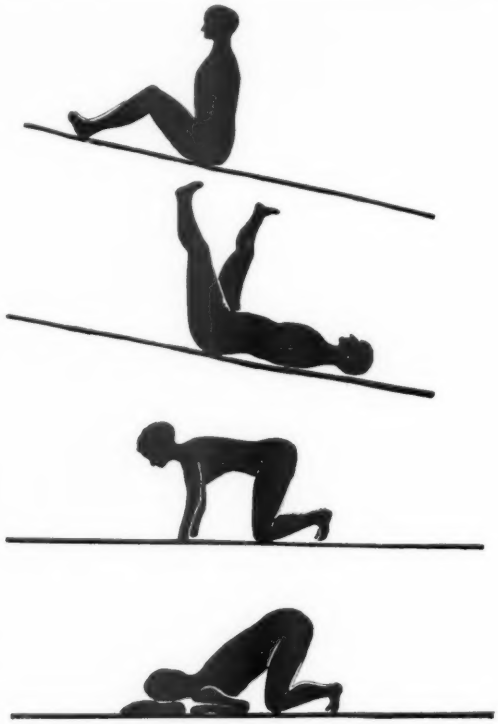

FIG. 5.

FIGS. 4 AND 5.

MARTIN'S EXERCISES.

All of these with the lower extremities require the fixing of the pelvis upon the trunk which is done by the muscles of the abdominal wall.

The first figure shows the position of the patient ready to begin the exercises.

Exercise 1. Flexion of the thigh upon the abdomen and the knees upon the thighs, brings into play, in addition to the muscles of the abdominal wall, the quadriceps extensor, hamstrings and iliopsoas.

Exercise 2. Flexion of the thighs with the legs extended brings into action the abdominal muscles, the iliopsoas and quadriceps extensor.

Exercise 3. Forced inspiration and expiration with the arms above the head. This brings into use the abdominal muscles as muscles of respiration, but particularly exercises the diaphragm, intercostals, pectorals, sternomastoid, trapezius and deltoid, as well as the muscles of the arm. Martin considers this the most important of all the exercises, and alternates it with each of the other exercises.

Exercise 4. Raising the trunk upon the heels and hands develops nearly every muscle in the body, but especially the muscles of the back and upper and lower extremities.

Exercise 5. Raising trunk to sitting posture. This brings into play all the abdominal muscles, but chiefly the rectus.

Exercise 6. Adduction and abduction of the lower extremities, the thigh being flexed on the abdomen and the legs extended. This requires the use of all the abdominal muscles to fix the pelvis upon the trunk, but especially exercises the adductors, the obturators and pyriformis, and of course the quadriceps extensor and iliopsoas.

Exercise 7. Inspiration and expiration on the hands and knees.

Exercise 8. Inspiration and expiration in the knee-chest position.

These two exercises are designed for women with retroverted uteri, the position and upward movement of the diaphragm tending to draw the uterus into normal position.

When in an individual predisposed by defective development, deficient musculature and faulty attitude occur, ptosis is inevitable. Rapid loss of flesh and repeated pregnancies exaggerate the condition.

Symptomatology. The symptoms of visceral ptosis may be divided into three groups:—

1. Gastric and intestinal stasis.
2. Pain due to tension on mesentery and peritoneum.
3. Neurasthenia.

Of the symptoms due to stasis, obstinate and prolonged constipation is the most pronounced. After this come gas formation in stomach and intestines, gastric distress, loss of flesh and strength, lowered muscular tone, and staining of the skin. The prolapsed stomach presses on the pancreas and interferes with its secretion, explaining many of the gastro-intestinal symptoms. The type of chest and the general malnutrition render this class of individual more susceptible to pulmonary tuberculosis and other infections.

Goldthwait[2b] has suggested that infectious arthritis may be due to absorption of toxines from the small intestine, the absence of pancreatic juice, which exerts an antiseptic action, allowing increase in bacterial growth.

The pain in visceral ptosis, aside from that due to disturbed digestion, is usually referred to the region of the umbilicus or lower abdomen, with the exception of that caused by movable kidney.

Of the neurasthenic symptoms it is hardly necessary to speak. In the most advanced cases they may be referred to every organ of the body.

Diagnosis. The diagnosis presents no difficulty, the characteristic enteroptotic figure being easily recognized. The x-ray and bismuth meal offer an exact method of determination of the degree of ptosis and stasis.

Treatment. Treatment may be considered under four heads: Medical, Gymnastic, Mechanical, Surgical.

Medical treatment should be directed to the improvement of the general condition, especially by proper diet, and to the relief of individual

symptoms, especially that of constipation. For the relief of this symptom nothing is so efficacious as the lubrication of the intestinal tract with liberal doses of the mineral oil known under the names of "liquid paraffine," "Russian oil," etc.

Gymnastic treatment may be said to include posture, exercises, and massage. The most careful attention should be paid to posture, correcting the drooping shoulders, the forward bend of the spine, and the protuberance of the abdomen. This is equally as necessary while sitting and lying as while standing. The patient should sleep without a pillow on a fairly hard bed; the effect of a pillow being to push the head forward, contracting the upper part of the chest, and relaxing the cervical fascia. The use of the Trendelenburg position is of value at times in the temporary relief of symptoms due to the stasis.

Of the mechanical methods of treatment, the corset is the most valuable. A good corset should have the following characteristics:

1. It should be short behind, especially at the top.
2. It should be long in front, especially at the bottom.
3. It should fit tightly about the pelvis.
4. It should fit loosely at its upper extremity.
5. It should lace in front.

Such a corset will throw the center of gravity backward, as shown by Reynolds and Lovett.[10] The proper application of the corset is of the utmost importance. It should be applied in the recumbent, or, better, Trendelenburg, position. It should lace in three sections, the lowest one very tightly, the middle less tightly, and the upper should produce no pressure whatever.

The various appliances for the relief of floating kidney have been universally unsuccessful because they have been designed without regard to the ptosis, of which the kidney is only a part. A well-fitting corset, by producing backward and upward pressure on all the viscera, will give better results than any of the special apparatuses for floating kidney.

Surgical Treatment. The great difficulty with the surgical treatment of ptosis is the multiplicity of conditions to be rectified. Coffey[5] gives the following list of operations which may be indicated.

Operation for Lane kink.
Operation for cecum mobile.
Operation for movable kidney.
Coffey's operation on great omentum.
Beyea's operation on lesser omentum.
Shortening of falciform ligament of liver.
Operations for changing shape of abdomen. (*a*) On lower abdomen. (*b*) On upper abdomen.

To these may be added removal of Jackson's membrane, appendectomy, operations on the female pelvic organs and perineorrhaphy. Concerning the operations of Kellogg[11] and Martin[12] on the ileo-cecal valve, we can only say that they are too experimental for discussion at present.

Operation for Lane kink as performed by Coffey[5] consists in division of the constricting band and shortening of the upper leaf of the mesentery.

There are a number of operations designed for cecum mobile. Wilms[9] splits the peritoneum in the right flank and then buries the ascending colon, making it retroperitoneal. Coffey[5] and others simply suture the cecum to the posterior parietal peritoneum at the proper level.

Where Jackson's membrane is present, removal of the membrane, especially at the constricting portions, is the operation most universally done, although Connell[13] twists the membrane into a rope, which he passes through the peritoneum at the outer side of the colon, and after drawing it through the muscle sutures it to the aponeurosis, forming a suspensory ligament for the cecum.

Of the operations for movable kidney it seems hardly necessary to speak.

Coffey[5] has devised an operation for shortening the falciform ligament of the liver by a series of purse-string sutures. He also sutures the liver itself to the peritoneum by sutures passing through the liver on either side of the notch made by the termination of the umbilical fissure.

Beyea[14] plicates the lesser omentum by a series of purse-string sutures.

Coffey suspends the great omentum, and by it the stomach and transverse colon to the anterior abdominal wall, by a series of sutures passing first through the peritoneum, near the original point of entrance. This line of sutures, usually about eight in number, runs transversely across the abdominal wall, being placed at such a level as to raise both the stomach and the transverse colon above the umbilicus.

In addition to these Coffey[5] has devised two very ingenious operations for restoring the respective proportions of the upper and lower abdomen. The operation on the lower abdomen is as follows: An incision is made through the aponeurosis of the external oblique parallel to its fibres, and two to three inches above Poupart's ligament. The aponeurosis is separated from the underlying muscle for a distance of three inches above the incision, and then the upper part is overlapped over the lower and held by a row of mattress sutures. The same operation is performed on the opposite side. The diameter of the lower abdomen is considerably reduced by this operation.

The technic of Coffey's operation for expanding the upper abdomen is as follows: The abdomen having been opened by a high median incision to perform the various plication and suspension operations previously described, the peritoneum is closed as usual. Instead of uniting the fascia along the line of incision, however, the anterior rectus sheath is split one inch or more outside, and an aponeurotic flap dissected

up and reflected toward the median line, the reflected edges being brought together instead of the edges of the original incision, thus giving a considerable increase in the circumference of the abdomen. The denuded anterior surface of the rectus is not covered in except by the subcutaneous fat and skin, which are united in the usual manner, sometimes a small drain being inserted down to the fascia.

Lane[6a] in cases of marked ileal stasis removes the entire large intestine except the rectum, uniting the ileum to the rectum by lateral anastomosis, thus getting rid of the stasis with its resulting auto-intoxication. The reader will be well repaid by a perusal of some of his papers, references to a few of which are given below.

Operative Results. Opinions differ widely. Coffey[5] reports 41 cases treated surgically by various combinations of the procedures mentioned. Of these, 26 were symptomatically cured, 9 much improved, 4 somewhat improved, 1 unimproved, 1 died.

Rovsing[15] sewed the stomach itself to the abdominal wall in 75 cases, in 22 of which he suspended the liver also, with good results.

J. G. Clark[16] reports 55% of successes after the Coffey operation.

On the other hand, W. J. Mayo[8b] says that "only a small number should be treated surgically. These patients are embryologically wrong."

Reynolds[17]: "Operation should be undertaken only when the surgeon has convinced himself that the local lesion is the cause of the symptoms and that the symptoms will be relieved by the operation."

R. R. Smith[4a] performed various pelvic operations on 51 cases suffering from enteroptosis, of whom 15 were entirely relieved, and all but two received some benefit, although 19 were not relieved nervously.

Ochsner[18]: "I consider enteroptosis of small surgical importance."

Joseph A. Blake[19] says: "There are two classes of cases:—

"1. Those in which ptosis of an organ contributes to the neurasthenic state simply by the effect on the organ itself (kidney, uterus, stomach). In this class the result of an operation depends on the degree to which the condition provokes or affects the neurasthenic state.

"2. Those in which a vicious circle is established (general splanchnoptosis). Operation in this class must relieve the auto-intoxication; and excision or exclusion of the colon is the only rational procedure."

Conclusion. The conflicting evidence reviewed in this paper is proof that none of the various methods of treatment has proved universally satisfactory. It is fair to say, however, that but few men have carried out any of the outlined procedures with the vigor ordinarily applied to the treatment of other pathological conditions. Concerning the surgical treatment, the amount of work so far done is too small upon which to base an opinion. The number of surgical procedures which a single case demands must prohibit operative treatment in a considerable proportion of cases. Gymnastic treatment must be of great benefit early in the process, but unfortunately the anatomical changes are so extensive in advanced cases that but little help can be expected from exercises.

Corsets, although of course only palliative, and never quite relieving the patient's symptoms, nevertheless are of much value, and probably in advanced visceral ptosis will continue to give more comfort than anything else.

The greatest prospect for improvement lies in prophylaxis, as pointed out by Goldthwait. Certain individuals are predisposed to ptosis by anatomical peculiarities. These patients should be easily recognized by their tendency to the ptotic figures, and by general muscular insufficiency. Such persons taken early in life, their attitude corrected, and their muscles developed by exercise and proper food, it should be possible to prevent the development of extreme cases of visceral ptosis.

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A FEW NOTES ON THE TREATMENT OF ANTEPOSED UTERI.*

By Henry T. Hutchins, M.D., Boston.

The mass of literature relative to malpositions of the uterus is enormous. Has there ever existed a surgeon, interested in gynecology, who has not at some time or other written his share and perhaps more than his share, on this subject? Several years ago I resolved that whatever I might write relative to any gynecological subject, the discussion of uterine malpositions was a completed chapter and I would never burden my hearers with additional theories in this field, but I have become thoroughly convinced that a large class of sufferers, the cause of whose

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symptoms has previously passed by unrecognized, can be relieved by surgical means.

For many years we have regarded an anteposed fundus as the normal position of the uterus, and a uterus found in this position as incapable of producing pelvic symptoms, especially those of low sacral backache, pelvic drag and pelvic congestion. That the classical symptoms of retroposition of the fundus not only can, but frequently are, caused by a uterus in anteposition, I believe to be true.

In the diagnosis of the cause of low backache and the common symptoms of pelvic drag and discomfort, the gynecological and orthopedic surgeons ought more frequently to work together. A great deal is being written at present on the symptomatology and treatment of various degrees of ptosis of the abdominal organs, chiefly in the female patient. In this discussion, one organ, the uterus, has received but scant attention from the point of the clinical diagnosis from existing symptoms. The retroposed uterus is commonly accepted as a definite cause of backache and pelvic drag. The anteposed uterus is as universally regarded as incapable of producing these symptoms, and when the fundus is found to be in the forward position another cause for the patient's symptoms is usually sought.

Various degrees of retroposition are spoken of as "a uterus in first, second, or third degree of retroposition." The anteposed uterus has received but little attention from a symptomatic standpoint. My attention was called to this fact by the appearance of many patients in my clinic complaining of low sacral backache and feelings of lack of low abdominal support, pelvic drag, etc., in whom on examination the fundus was found to be anteposed. At first I was at a loss to explain these symptoms, which occurred as frequently in women who had not borne children as in those who had. This led to a study of the anteposed uterus in all cases, both when seen at the time of examination and also during the course of many abdominal operations for pelvic diseases. It was soon seen that the anteposed uterus was capable of as wide excursions from the normal as the retroposed. So many cases appeared with retroposed fundus who had no symptoms of backache and pelvic drag, that I came to disregard the position of the fundus entirely in making my diagnosis and began to confine my attention to the relative position of the cervix only, in relation to the pelvic frame. It was then found that anteposed uteri did not occupy a fixed position in relation to the pelvis, but they were found to be in varying degrees of ascensus and descensus, according to the stability of the cervical supports. Some were found to be held snugly up to the symphysis with the bladder and anterior vaginal wall well supported, while others were found to have dropped back toward the hollow of the sacrum, while still maintaining their anteposed positions. In considering these cases, I refer only to those cases of descensus in an antero-posterior direction, and not those of beginning prolapse with rotation toward the pelvic outlet, which cases form quite another and distinct class.

On further investigation, it was found that in every case of what I have termed an "anteposed uterus in descensus" which presented the symptoms of a retroposition, it was possible, by properly placed tampons which forced the uterus as a whole well upward, relieving the drag on the cervical supports, to relieve the patient of all her symptoms. The placing of tampons being a temporary expedient, I determined to operate and suspend these uteri for permanent relief, although heretofore I had never opened the abdomen for the purpose of suspending an anteposed fundus. At the same time a further study of these cases was begun in the hope of finding other causes for the symptoms, and this study was carried out in the operating room after the abdomen was opened.

Opening the abdomen by a generous incision and widely retracting the wound, the pelvis is exposed by gently drawing back the intestines without disturbing the relations of the pelvic organs. On inspection, the following conditions are noted: In cases where the uterus as a whole is well held up in the pelvis by its cervical supports, *whether the fundus is in anteposition or retroposition*, there will be (1) no fullness, congestion or dilatation of the ovarian and anastomosing veins as they run through the infundibulo-pelvic and broad ligaments; (2) there will be present no drag on the parietal peritoneum covering the lateral walls of the pelvis, especially that part covering the infundibulo-pelvic ligament; (3) there is no tension on either the round or utero-sacral ligaments, which in turn are covered by parietal peritoneum; (4) there is no descent of the bladder nor engorgement of the vesicle veins.

Quite a different picture is presented in that group of cases in which the cervical supports have given away and the uterus as a whole has descended into the bottom of the pelvis, still without regard as to whether the fundus is anteverted or retroverted. In this group of cases we see on inspection: (1) the ovarian and anastomosing veins full, congested and dilated, forming a so-called varicocele of greater or less intensity. This fullness and distention extends throughout the pelvic portion of these veins, but it will be noticed ends abruptly as the veins cross the posterior pelvic brim from which point upward they are normal in size. (2) The infundibulo-pelvic ligament and parietal peritoneum are put decidedly on the stretch, the chief drag coming from the posterior part of the pelvis at or near the attachments over the sacro-iliac joint. (3) The round and utero-sacral ligaments share in this drag. (4) The bladder has gone down with the descent of the cervix and the vesical veins have shared the general pelvic engorgement.

As striking as this picture is, still more striking is the picture presented by the following manipulations. Grasping the anteposed but descended uterus with forceps and bringing it up to the point where the suspension is to carry it, the following results are visible: (1) The ovarian veins and their anastomotic branches, being relieved of tension, immediately empty themselves and become normal. (2) The pull and drag on the sensitive parietal peritoneum is completely released. In a moment we can see exactly what our suspension is going to accomplish before we perform it. As like results are accomplished whether the fundus is forward or back, provided the uterus is in descensus, it follows that it is the descensus alone and not the version of the fundus which is the leading factor in the diagnosis of these conditions. The cervix remaining as a well suspended, fixed point, it matters not symptomatically whether the fundus is forward or back. But let the cervical supports give way and the uterus as a whole descends in the pelvis. This descent cannot take place except at the expense of pulling the parietal peritoneum and the blood vessels contained in it, and putting these structures on a stretch from the brim of the pelvis downward. The ovarian veins are the chief sufferers. They return most of the blood from the pelvic organs to the general circulation. They are long veins, they enter the vena cava and renal vein high in the abdomen and contain no valves. They have a great deal of work to do and are poorly equipped to do it. When the pelvic drag comes, stasis takes place below the point where the veins cross the pelvic brim and the blood is with difficulty returned, resulting in an engorgement of these vessels below this point. The parietal peritoneum is extremely sensitive to tension and in the cases we are discussing, this tension is greatest at the posterior pelvic brim. These two factors fully account for the symptoms produced by a uterus in descensus.

These facts have led me to suspend many anteposed uteri when symptoms have persisted which I have heretofore attributed only to retroposed uteri, but with very satisfactory results.

If, on examination before operation, the cervix is found low in the pelvis, the uterus as a whole low, whether the fundus is forward or not, and if the lower supports have given way, the pull must necessarily come, in some measure, on the parietal peritoneum which covers and forms a large part of the pelvic ligaments. Especially is this true with the infundibulo-pelvic ligament containing the ovarian vessels. Thus even an anteposed uterus, providing it is in descensus, may readily cause sacral backache and the bearing-down pains and feeling of fullness and weight due to partial occlusion and congestion of the ovarian veins. If one is in doubt as to whether an anteposed uterus is causing these symptoms or not, he has only to properly place a vaginal tampon which will force the cervix up and hold it in position for forty-eight hours and note the result. If the symptoms of drag and backache are relieved by this procedure, then the surgeon is fully justified in suspending an anteposed uterus. It is the recognition of these symptoms *without* the presence of a retroposed fundus which is important. I have come to regard the position of the *fundus* as of little moment symptomatically, but I always determine the relative position of the *cervix* in the pelvis and base my judgment of whether a suspension is necessary or not upon the amount of descent of the cervical portion. I will cite only two cases:—

CASE 1. Mrs. B., 41 years old, 3 para. Chief complaint was sacral backache. She had not been able to sleep on her back for five years on account of this sacral backache which was just as bad when lying in that position as when on her feet. This is an important point and would be expected from the conditions above described, as there is no less drag when a patient is on her back than when she is on her feet. The night before operation she did not rest at all on account of this severe backache. Upon examination I found a relaxed perineum and lacerated cervix. The uterus was of normal size and anteposed, but the organ as a whole was in marked descensus in the pelvis. Again the term descensus must not be confused with the term prolapse. There is no prolapse in these cases and the cervix does not approach the introitus. By descent I mean a falling directly backward toward the hollow of the sacrum when the patient is in the dorsal position. I do not mean a rotation toward the outlet which is a much later stage, and an entirely different condition. The doctor who had referred the case did not believe a suspension should be done because the uterus was not retroverted. The patient had, however, every symptom of a retroversion, and believing that the repair of the lacerations alone does very little good in these cases, *i.e.* does not reach the cause of the trouble, the abdominal operation was urged and accepted. After repairing the cervix and perineum, the abdomen was opened and just the conditions above described were found. It was possible to demonstrate in a moment what the actual result of a suspension of even an anteposed uterus which is in descensus would bring about. The ovarian veins between the uterus and pelvic brim were engorged and dilated, while above the pelvic brim they were collapsed. The sensitive parietal peritoneum covering the infundibulo-pelvic ligament was tense and the pull came from a point just over the sacro-iliac joint. As the anteposed but descended uterus was raised, and the pressure at the pelvic brim relieved, the veins immediately emptied and the peritoneum relaxed.

From the moment the patient came out of ether she was relieved completely of her backache, which she had had for five years, and she has had no return. She had not the slightest backache even the first night after operation, nor during her entire convalescence.

The second case was that of a young married woman, 26 years old, who had never had children. The same condition was found, an anteposed uterus in descensus, the same drag and congestion of

ovarian veins demonstrated, and the same result after operation.

To offset these cases I will mention another, a woman, 38 years, two para., who also had sacral backache. The uterus was anteposed, and as her physician felt strongly that an abdominal operation was not necessary, I did only the plastics. She is at a loss to know why her backache is no better after the operation as she had been assured by her physician that it would disappear. This anteposed uterus should have been suspended.

The symptom of sacral backache is so common in women who have borne children and in women who have not, that it deserves close attention. Mistakes in diagnosis are made by us all. Many backs have been strapped, plaster jackets applied, belts worn, etc., by women with sacral backache in whom no retroverted uterus was found, but in whom descensus of an anteposed uterus was not recognized, and on the other hand many retroverted uteri, still well held up by the cervix, have been suspended when the patient should have had treatment by the orthopedic surgeon.

The observations made at the time of operation and the results that have been obtained by operation, have led to the conclusion that sacral pain and backache may be caused by a uterus in descensus regardless of the position of the fundus, provided that by this descent the pull is transmitted to the parietal peritoneum covering the ovarian vessels, forming the so-called infundibulo-pelvic ligament, and that *with* this pull there is present a stasis in the ovarian and anastomosing veins. This possibility should be borne in mind when examining a patient, whether the fundus is forward or not, and the amount of the descensus noted. A moment taken at the time of operation to inspect structures *in situ* is well spent and may lead to a more beneficial operative procedure than by following an accustomed routine. The effect of a suspension of the uterus should be noted as far as possible before the method of performing that suspension is determined upon.

It is far from my wish to leave the impression that every uterus, whether anteposed or retroposed, needs a suspension. As a matter of fact, the more clearly I differentiate my cases, the more conservative I become as to advising a suspension. Although the fundus may be retroposed, if the cervix is well held up, these cases seldom give symptoms and do not need any operative treatment. On the other hand, one should not hesitate to suspend a uterus already anteposed, provided the drop of the cervix with following descensus is present.

In summing up the situation it seems reasonable to conclude: (1) The position of the fundus is of little importance from a symptomatic standpoint. (2) Descent of the cervix, irrespective of the position of the fundus, causes drag on the parietal peritoneum of the pelvis with congestion of the ovarian veins. (3) We must recognize this descent as a symptomatic factor and not hesitate to suspend an anteposed uterus when such descent is present. (4) In every case, before operating, we should prove by temporary means to the patient's and to our own satisfaction, that the malposition is the cause of the patient's symptoms. We will then suspend only those few selected cases where a suspension is necessary.

Medical Progress.

PROGRESS IN OPHTHALMOLOGY.

By Edmund W. Clap, M.D., Boston.

RUPTURE OF THE GLOBE.

Fuchs calls attention to a class of ruptures of the eyeball often not recognized as such. Of course the ordinary ruptures from a heavy blow occur usually in the sclera concentric with the corneal margin and a little back from the limbus and are 10 to 12 mm. in length. They are most frequent above or above and nasal, rarely to the temporal side. The uniform location of these ruptures in spite of the variety of trauma which causes them is due to the weakness in the region of Schlemm's canal and the place where the anterior ciliary vessels penetrate the sclera. The internal break is there, while the external is further back, the tear is oblique. But there is another variety of rupture often overlooked. These are small, seldom greater than 2 to 4 mm., and while the internal break is at Schlemm's canal the external tear is at the limbus or even partially in the transparent cornea viz. perpendicular to the cornea or even obliquely towards the center of the cornea. These ruptures too, instead of being under the conjunctiva, invariably tear the conjunctiva. Almost constantly we find a small prolapse of iris. The internal injuries are less than in the case of typical rupture, hyphaema, small tears of iris or a partial iridodialysis and sometimes a rupture of the zonula of Zinn occur. Rupture of lens capsule is shown by a clouding of the lens coming on within a few weeks. This small rupture is more common in young people than in old. The prognosis is good, infection being rare. The prolapse should be excised and the iris replaced, which can be done unless a week has passed since the injury. Besides these, cases of incomplete rupture can occur in which a break happens at the canal of Schlemm and involves some inner layers of the sclera. The diagnosis is made certain later if a thin bluish line appears concentric with the limbus, which region may later become ectatic and the eye show increased tension. The pupil is often drawn up towards the rupture too.

BRAWNY SCLERITIS.

Stephenson reports a case and gives an excellent summary of what we know about a rare disease first fully described by Schlodtman from Fuchs' clinic as Brawny Infiltration of Conjunctiva and Sclera. I quote Stephenson's review as follows: Brawny scleritis has been called annular scleritis and gelatinous scleritis. It is a disease of middle life or old age and affects men more often than women. It runs a very chronic course with exacerbations of pain, lacrymation, photophobia and increased redness. At first a painless inflammation without known cause affects the anterior segment of the globe usually in both eyes though not perhaps beginning at the same time. The early stage may involve one portion of the circumference, though sooner or later there is a girdle about the cornea not extending beyond the curvilinear line which marks the attachment of the recti tendons. The infiltration is gelatinous and succulent, diffuse and has a reddish brown hue and is not usually nodulated unless the inflammation involves the insertion of the recti muscles. In the further course of the disease the infiltration spreads into the cornea, taking the form of a sclerosing keratitis. The anterior segment of the uveal tract becomes involved usually late in the disease as indicated clinically by keratitis punctata, posterior synechiae, occlusion of the pupil, vitreous opacities and lowered tension. Many of these eyes have come to pathological examination and in general dense infiltration of the sclera with mononuclear leucocytes and some polynuclear cells was found by all observers. Destruction of some lamellae of the sclera, giant cells and areas of fatty degeneration, peri and endarteritis have been present. Verhoeff pointed out that the findings in all reported cases are suggestive of syphilis. The appearance and course of the disease are fairly typical. Gumma of the sclera is an equally rare condition and would not be as diffuse nor would it last for years without breaking down. It would yield to proper treatment. Gunn described a monocular, probably gummatous infiltration of conjunctiva and episcleral tissue associated with secondary syphilis and promptly disappearing under antisyphilitic treatment. This occurred in young people only and showed a zone of semi-translucent swollen conjunctiva of a pink or red color surrounding the cornea. Other writers have described a similar condition but it should not be confounded with brawny scleritis.

JUVENILE GLAUCOMA.

Löhlein has made a very extensive study of juvenile glaucoma and sums up as follows: Under juvenile glaucoma we include primary glaucoma of young people, sharply distinguished clinically from congenital hydro-phthalmus and perhaps more arbitrarily from glaucoma of adults. We may draw the line at 35 years. Löhlein had ten cases of his own and collected 82 published cases. A few cases occur between the fifth and the tenth years, but a much greater number between 15 and 20, 40% of the cases occurred here, 10 myopic and 17 hypermetropic ones. Contrary to the incidence in adult glaucoma more males were affected than females and this is true also of buphthalmos. Sixty-two percent of all the cases were glaucoma simplex. Of all the cases 50% were myopic and a third of these had a myopia of more than six diopters while in glaucoma of adults myopia appears in not more than 15%. The statement that juvenile glaucoma is frequently monocular finds no support. It occurred in on eye only in 20%, which agrees with Wecker's statistics for adults. The resistence and power of adaptation of the tissues of youth accounts for a frequently very long prodromal stage. The passing of a regular astigmatism into one against the rule with the increasing tension would tend to contradict Schmidt-Rimpler's view that the astigmatism against the rule coming on in adults with glaucoma does not arise from the increased pressure but is merely a change of advancing age. Of course many cases of glaucoma in young people follow exactly the course of the disease in adults. One-fifth of the cases have the type with a deep anterior chamber and this variety may be a late modified buphthalmos. The frequency of myopia is explained by the increased tension causing an axial myopia in these young eyes from stretching.

Heredity plays a great rôle in our cases for although not inquired into in all cases it is mentioned in 20%. The cause of most of the cases of juvenile glaucoma which are not simply adult glaucoma occurring in youth is to be found in some congenital defect or anomaly of development. In 50% we find defects such as persistent hyaloid artery, coloboma of iris, of lens, of nerve and lamellar cataract, all of which point to some fault of development which may also give rise to the glaucoma.

In the discussion of Löhlein's paper, Fuchs gave this classification of juvenile glaucoma: (1) True glaucoma with shallow anterior chamber in members of a family in which the disease is common and appears early. This type is identical with senile glaucoma. It is hereditary and familial; (2) Glaucoma caused by congenital malformations as buphthalmos; (3) Glaucoma with deep anterior chamber and myopia; (4) Glaucoma with deep anterior chamber and fine punctate keratitis, this is a secondary glaucoma but when the precipitates on Descemet's membrane are absent, it may be taken for a primary glaucoma.

RADIUM IN OCULAR THERAPEUTICS.

Koster has secured favorable results from treatment of various eye diseases with radium and mesothorium. He began in 1905. After

trying various methods he now uses a small glass tube containing five milligrams of radium bromide or four milligrams of mesothorium, though on the lids he sometimes uses a little ebonite box. The tubes are of thermometer glass with a little bulb blown on the end. Parenchymatous keratitis is treated from one-half to an hour, five to ten sittings with intervals of three, five, or seven days, according to the irritation. The cornea is not actually touched. The results were extremely favorable though other methods of treatment were used too. Leucomata of the cornea can be much thinned and if not too thick to begin with, the sight is much improved. Scleritis is favorably influenced in connection with other treatment. Not much result was obtained in retinitis pigmentosa or optic atrophy. When the sight is blurred by products of past inflammation the radium treatment of the back of the eye has a good effect. Vitreous opacities and hemorrhages clear up considerably. Cataract secondary to uveitis or chorioditis is favorably influenced but ordinary senile cataract is probably not changed by this treatment. Naevus pigmentosus and xanthelasma both disappear under treatment and epitheliomata were very successfully treated. All these diseases are either inflammations or hypertrophic growths, which accounts for the favorable action of radium in so many conditions.

Mattice reports the treatment of an epithelioma of the cornea with the barium carbonate salt of radium. A mica box container was applied to the tumor mass for six minutes and in a week a twelve minute application was made. Six weeks after the first treatment the tumor remains were given a fifteen minute exposure. The tumor which had covered the cornea and involved the conjunctiva had disappeared and the vision had improved from light perception to twenty-seventieths.

ETIOLOGY OF CHRONIC UVEITIS.

De Schweinitz at the seventeenth International Congress of Medicine discussed the pathogenesis of chronic uveitis excluding the syphilitic, tubercular and sympathetic varieties, deriving his material from an analysis of the literature for ten years past, an investigation of the views and experiences of American colleagues and a study of gastro-intestinal and auto-intoxication in relation to this affection. The frequency of primary uveitis varies from .9% to 2.4% and it seems more common in northern than in southern climates. As Stephenson said probably every case is of septic or of toxic origin. The infection may be exogenous or endogenous. After careful analysis of all described etiological factors he reaches the following general conclusions. Acute articular rheumatism is rarely if ever a cause of uveitis but various types of polyarthritis and myalgia may be associated with it, and be manifestations of the same toxemia. We should not yet abandon the view that the same cause that produces gout may also produce a chemical inflammation of the uveal tract. It is possible that diabetes more rarely may do the same. There is bacteriological and clinical evidence that the majority of cases of uveitis are caused by micro-organisms or their toxins. The gonococcus and the staphylococcus are the most important and the primary source of the latter is most frequently a chronic septic process in the mouth, tonsil, naso-pharynx, accessory nasal sinuses, in the uterine cavity or in the skin (boils, etc.) It is probable that in most instances living bacteria reach the uveal tract and they and their toxins cause the varieties of inflammation classified under the term uveitis. Indican in excessive amounts in the urine indicates intestinal putrefaction but other analyses must be made and if intestinal putrefaction dependent upon bacterial activity is present there is a source from which toxins may arise to cause uveitis. A thorough investigation of every patient's metabolism may lead to the finding of a group of diseases of the uveal tract caused by infections of bacterial origin arising in the intestinal tract.

DILATATION OF PUPIL FROM CORNEAL SCAR.

Zur Nedden has noticed that in superficial injuries leaving a large central scar of the cornea, the pupil of the injured eye often becomes larger than the pupil of the sound eye.

His cases occurred mostly after infected ulcers of the cornea which left a central dense scar covering the normal pupillary area. Of course aniscoria frequently occurs without any apparent cause or it may be due to diseases of the nervous system. But his cases had been under observation either before the injury or after the scar was freshly formed and no difference in the size of the pupils observed. The author carefully excluded any disease that could cause the aniscoria in his cases, or any weakening of the pupillary muscle from use of a mydriatic. In all of his cases the reactions of the pupil were prompt and normal in both eyes but the pupil of the affected eye was one and one-half to two millimeters larger in diameter and preserved this relative difference in shadow or in light or during convergence. This difference in size of the pupils came on only after a year or more; it was not seen three or four months after the injury. It was not observed in peripheral or eccentric scars, or in such large central ones that the eye was practically blind. The vision in these cases was decidedly improved by the larger pupil and this without any thinning of the scar. In two cases where the scar did get thinner the pupil remained larger. The author thinks it may be an attempt of nature to get better vision. At any event, it does not occur in every eye where it might be expected.

PROGRESSIVE FAMILIAL MACULAR DEGENERATION.

Darier has published the history of five cases of progressive familial macular degeneration and reviewed the literature. Stargardt in 1909 gave the history of two families, one of four persons all affected, and a second in which three out of five were affected. In these families there was no other familial ocular disease, the parents were well and not related. The trouble began with a central scotoma for red and green at 12 to 15 years without any fundus lesion, next came a relative scotoma and then an absolute one for white, and finally total loss of central vision. The periphery of the field remained normal for white and colors. The ophthalmoscopic signs began with an irregularity of pigmentation in the macula, of greyish yellow spots. Blotches and whitish streaks appeared and pigment spots like osteoblasts. The yellowish spots ended by fusing into a single horizontal oval spot varying in size from one-third the papilla to two or three times its size. This spot was outlined by pigment and attained its maximum about the twentieth year and then remained a long time stationary. Jennings in 1909 reported three cases in the same family, the parents being cousins. Batten had a similar affection in two brothers out of seven children. Lutz in 1911 reported a family of nine children, four of whom rapidly lost their vision about the twelfth year. Little yellow-gray spots mingled with pigment were seen in and about the macular region. Stirling in 1912 reported three cases in one family and Nettleship, 1909, and Doyne, 1899, have seen similar cases. Stargardt recently gave three new cases from one family. Now from 23 cases altogether, we may describe the course of this disease. The affection beginning about the twelfth year is insidious and progressive though rarely sudden in onset. In Darier's five cases it was slow in onset and has now been under observation 20 years. One may find no lesions of the fundus at first, or at times macular changes may occur before vision is affected. Central vision is always impaired, fine characters are lost first. The two eyes are attacked at the same time and the vision is nearly the same in each eye and fails equally. In some cases the loss of vision is rapid for a time and then remains at the same degree for a long period; in others, the failure is gradual for from 10 to 30 years. Lesions outside the macular region are exceptional. Stargardt thinks the process is one of degeneration resembling that in idiotic family amaurosis. Batten's two cases are of the maculo-cerebral type which begins early and goes into dementia. If the macular changes do not appear till 12 or 14, the brain is not affected. Syphilis may be safely excluded as a cause. This hereditary fault has not yet been found in several generations.

THE ELLIOT OPERATION.

The Elliot operation of trephining the sclerocorneal margin for glaucoma has received a great deal of attention this year and its limits are being defined. The papers on this subject are so numerous (over 200 this year alone) that only a few of the more important can be quoted. The more conservative authors would limit the operation to cases of chronic glaucoma which cannot be controlled by mioties, but the majority would advise trephining in all chronic glaucomas, and many favorable results have followed this operation in acute glaucoma, but iridectomy is preferred by the majority for acute cases. The dangers of the Elliot operation seem to be, injury to lens at time of operation, detachment of chorioid, so-called quiet iritis during the healing, and late infection via the conjunctiva over the trephine hole. Stephenson discusses some causes of failure after the operation; occlusion of the trephine opening by proliferation of tissue, or blocking by iris or ciliary body, lens, or vitreous; and intraocular hemorrhage which is rarer than after iridectomy. Detachment of the chorioid is usually temporary and of course occurs also after iridectomy, Lagrange operation or even after cataract extraction. Quiet iritis occurs, too, after ordinary iridectomy though often overlooked. Its evils may be avoided if atropine is used 24 hours after operation if the pupil is not well dilated or active. The accident of having the trephined disk drop into the anterior chamber has happened without evil results several times but Stephenson had a case which was followed by severe irido-cyclitis. As the operation is more used more reports of late infection are published.

Col. Elliot's latest article deals with some points of technic and with some objections to the operation. He believes that the vesicular type of filtration scar is to be avoided and when obtained is due to faulty methods of making the flap or splitting the cornea. The fluid escape should not be confined to a small area at and just about the corneal opening. The vesicular scar may be abraded during movements of the globe and it may give rise to infection from any organism that may be in the conjunctival sac. The flap should be as large as possible, beginning at the fornix above and the extremities kept well away from the limbus. Next only a small area of the flap must be actually dissected up, narrowing down at the limbus to just enough to give room to split the cornea and place the trephine. If the tissue at the sides is undamaged there will be normal subconjunctival tissue for extended filtration and the flap will be held in good position when released so as not to need a stitch. As we approach the limbus we should work a little deeper so as to make the base of the flap thick enough to avoid a vesicular scar, and so, too, the cornea should be split along the inter-lamellar spaces, not merely

cutting under the epithelium and Bowman's membrane. We cannot always avoid getting scars where the subsequent filtration is much more abundant in the region of the trephine hole, though this is not ideal, but we should not get a thin walled projecting vesicle whose cavity is in direct communication with the interior of the eye. Impaction of uveal tissue in the wound results from: (1) Undue traction during iridectomy, avoided by doing the iridectomy when the disc is cut, both disc and iris being seized together and cut off with the same snip of the scissors. (2) Sudden movement of the patient. (3) Forward movement of structures within, which mechanically push the iris into the trephine hole. (4) Iris being washed into the opening by the aqueous, this occurring after the patient has left the operating table. Col. Elliot thinks an iridectomy, a buttonhole opposite the trephine hole, should always be done. He thinks by using a 2 mm. trephine and not cutting the disc completely around we can regulate the size of the opening by completing the cut with the scissors, taking only part of the disc if we need only a moderate degree of filtration. The disc should be cut through completely at the corneal edge and hinged to the scleral side. Late infection has been reported in 14 cases so far and a great many trephinings have been done. Most of the cases are desperate and some risk is justifiable and the operation is not alone in having this danger.

THE EYE SYMPTOMS OF GENERAL PARALYSIS.

Uhthoff from a large experience sums up the eye symptoms occurring in general paralysis as follows: Optic atrophy in 8%, optic neuritis in 2%, Argyll-Robertson pupil in 44%, unequal pupils in 22%, miosis in 25%, irregular pupils in 25%, ocular muscle paralysis in 10%. This incidence of optic atrophy is the same as in tabes. In all cases of progressive optic atrophy he has found in 95% signs of either tabes or of general paralysis and some of the excepted 5% had escaped from observation, which means that progressive optic atrophy is diagnostic of either tabes or general paralysis. Cases that remain confined to one eye are rare and probably not true progressive atrophy, but are secondary to syphilis of the brain. In both tabes and general paralysis the optic nerve changes are the same and are always associated with changes in the spinal cord. Hemianopsia is rare and suggests syphilis of the base. Optic neuritis and choked disc are not due to the general paralysis, but to basal syphilis and to hydrocephalus. Uhthoff has not found characteristic macular changes. A unilateral Argyll-Robertson pupil has the same diagnostic importance as a bilateral. In recognizing anisocoria Uhthoff did not take into account slight differences in size of the pupil, which are common in healthy individuals as well as are slight irregularities of the pupil.

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Clinical Department.

PAROTID FISTULA FOLLOWING MASTOID OPERATION.

BY PHILIP HAMMOND, M.D., BOSTON.

ALTHOUGH it is well known that the mastoid operation is beset with difficulties, and that in performing it numerous structures may be injured, it would appear that the parotid gland is not subject to such injury. One does not think of it as lying in the course of the incision, and the writer has not been able to find any reference to it as one of the dangers to be avoided. While apparently unknown as a sequel to the mastoid operation, fistulae of the parotid gland are occasionally encountered by the general surgeon, and are considered to be extremely difficult to heal. The existence of such a fistula may be of exceeding annoyance to its possessor,[1] particularly in the case of a woman. The constant discharge of saliva renders one objectionable to his fellowmen, and the great increase during mastication necessitates satisfying hunger in solitude. The amount of fluid excreted may assume considerable proportions. Duphenix collected from a salivary fistula seventy grams of fluid in fifteen minutes, and a patient of Jobert's discharged several cupfuls in twenty-four hours. Attempts to close the fistula by cauterizing are recommended by some authorities before resorting to surgical intervention. The latter does not invariably cure, as it is extremely difficult to obtain a wound free from infection. Several successfully-operated cases are reported by Armstrong.[2]

The following case was brought to the attention of the writer at the Massachusetts Charitable Eye and Ear Infirmary, on July 7, 1913:

M. G., female, 9 years old. Five years before had had mastoid operation on right ear. Both ear and mastoid had healed in due course. The mother stated that during the past five years there had been a persistent discharge of watery fluid from the right cheek.

Examination revealed that the drum was healed. There was a depressed scar over the right mastoid extending nearly to the angle of the jaw. At the extreme lower end of this incision was a fistula so small as to be practically invisible. It was noticeable only as one saw fluid exude from it. The discharge was slight but constant, and was markedly increased while eating, or while chewing gum. The patient was kept under observation more than a week while exhaustive tests were made to establish beyond a doubt the fact that it was really a parotid fistula. On several occasions, potassium iodide ingested plain, and in capsule gave the starch reaction from the discharge within twenty minutes.

On July 22, 1913, under ether a piece of horsehair was inserted into the fistula as far as it would go, about one-fourth of an inch. Using this as a guide, the tract was extirpated *en masse*, uncovering gland tissue. The incision was closed with three horse-hair sutures. The wound healed by primary union, and the sutures were removed on the fourth day.

The patient remained under observation until July 30, the eighth day following operation, when she was discharged from the hospital cured. I received a note from her parents on Nov. 24, 1914, in response to an inquiry, stating that she had remained well. This case is reported because of its exceeding rarity.

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[2] Am. Practice of Surgery, Vol. vi, p. 298.

Book Reviews.

Essentials of Physiology. By F. A. BAINBRIDGE, M.A., M.D. (Cantab.), D.Sc. (Lond.), F.R.C.P., and J. ACWORTH MENZIES, M.D. (Edin.) With 134 illustrations. London: Longmans, Green and Company. 1914.

This excellent small text-book aims to compile in concise form the fundamental facts and principles of physiology for medical students. So far as possible, histologic details, descriptions of chemical and experimental methods, and matters of purely historic interest have been omitted. The Basle nomenclature is introduced throughout in brackets. Most text-books of physiology are so overburdened with details of the sort here omitted, as to be not only wearisome, but sometimes quite unreadable. The authors of this volume have shown their wisdom as well as their scientific knowledge and literary skill, by producing a convenient text-book in physiology which is actually attractive and interesting to read.

Cunningham's Manual of Practical Anatomy. Revised and edited by ARTHUR ROBINSON, Professor of Anatomy in the University of Edinburgh. Sixth edition. New York: William Wood and Company. 1914.

This sixth and latest edition of Cunningham's dissecting manual is welcome to students and teachers of anatomy. The text has been wholly revised, some of the figures altered, several new figures added, and a series of radiographs introduced. The chief alterations are in the section on the brain, which has been rearranged and largely rewritten. The first volume is illustrated with 249 figures in the text and 22 plates, 60 of which are in colors, and the second volume with 267 illustrations in the text and 11 plates. The Basle nomenclature is used throughout. The work thus adds to its former distinguished merits others which still further increase its already established standard of excellence and reliability.

Infant Feeding and Infant Metabolism. A Foundation for the Practitioner. By LEO LANGSTEIN and LUDWIG F. MEYER, Berlin. With 46 illustrations in the text. Second and third editions. Revised and enlarged. Wiesbaden: J. F. Bergmann. 1914.

This second and third edition of a standard German text-book on infant feeding has been delayed by the authors to enable the decision of various points in conflict and to permit the digestion and assimilation of the abundant additional material at their disposal. Fundamentally this work represents the pediatric principles upon which American methods of infant feeding are based, yet it is so cumbered with theoretic and laboratory details as hardly to be of available value to English-speaking practitioners.

Animal Experimentation and Medical Progress. By WILLIAM WILLIAMS KEEN, M.D., LL.D., Professor Emeritus of Surgery, Jefferson Medical College, Philadelphia. Boston and New York: Houghton Mifflin Company. 1914.

Mr. Stephen Paget's "For and Against Experiments on Animals" was reviewed in the issue of the JOURNAL for Nov. 14, 1912 (Vol. clxvii, p. 701). Dr. Keen's book is of much the same purpose and type. It consists of a series of fifteen essays, on topics connected with vivisection, which have previously appeared in various publications, one of them, on "The Influence of Antivivisection on Character," in the JOURNAL of May 2 and 9, 1912. There is a characteristic introduction by President Eliot. Like Mr. Paget's, this work "should prove a useful source of authoritative material for future defense of animal experimentation." Dr. Keen's facile literary style makes his book not only valuable but delightfully attractive.

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126 Massachusetts Ave., Corner Boylston St., Boston, Massachusetts.

ANNOUNCEMENT.

THE announcement attached to the front cover-page of this issue calls attention to various changes in the administrative and editorial organization of the JOURNAL.

The appointment of a committee of consulting editors, it is believed, will result in an increased value of the editorial pages to the profession. From week to week members of this committee will contribute editorials commenting upon or interpreting important technical original articles appearing in the columns of the JOURNAL. They will also consult upon all matters of policy, so that the editorial conduct of the JOURNAL will represent, not the opinion of a few, but the collective judgment of a number of experts.

From its continuing affiliation with the Massachusetts Medical Society, the JOURNAL, as official organ of that association, will publish its proceedings, notices, news, and from time to time such editorial communications as the president or other officers of the society may wish to make to the profession.

An arrangement is also in process of development, whereby preliminary communications, and reports of clinical and laboratory research work done at the Harvard Medical School and allied hospitals will appear in these columns.

Editorially the JOURNAL will continue its policy of non-partisan comment on medical legislation and other current events of medical importance, seeking fairly to represent all sides of every question, avoiding personal controversy, aiming judicially to reach wise decisions, to encourage tolerant discussion, and impartially to guide professional opinion. The new editor-in-chief assumes his duties with most grateful and appreciative respect to his predecessors in office; with reverence for the honorable traditions of the past, with consciousness of his responsibilities in the present, with hope that in future the JOURNAL, changing and adapting itself to the needs of new occasions, yet retaining its intrinsic and original character, may without interruption continue worthily to represent and serve the medical profession at home and abroad.

THE TESTS FOR MEMBERSHIP IN THE MASSACHUSETTS MEDICAL SOCIETY.

IT is provided in the Acts of the Commonwealth that "no person shall become a member of the Massachusetts Medical Society except upon an examination by the censors of said society." It is further provided in the by-laws that the censors of each District Society shall meet at least twice a year for the examination of applicants, and that applicants shall not be considered as possessing the requisite qualifications for fellowship unless approved by at least three (of the five) censors. General uniformity of plan of examination in the several districts is secured by a Board of Supervising Censors, one being named by each district, who meet annually for the purpose of preparing the papers.

Most Fellows have joined the society shortly after completing their medical curriculum and at a time when they are probably best fitted to stand a written test in all of the ten or more subjects in which the censors usually examine. This examination is one of three, which for most men come in rather close succession, and which are all somewhat similar in scope,—the other two being the test set by the medical school for the degree, and that given by the State Board of Regis-

tration for the legal right to practise. The last of these three is the only one which is absolutely indispensable for medical practitioners in Massachusetts, where, unfortunately, by law the Board of Registration may not require the possession of a diploma as evidence that the candidate has received a proper medical or premedical education.

Membership in the State Society, however, carries with it so many advantages, educational, legal, ethical and social, that all qualified practitioners should seek it. What shall be done in the case of physicians who by reason of removal into the state after some years of practise elsewhere, or from neglect to make more timely application, find themselves in mid-life, while legally qualified practitioners, outside the pale of the society? Shall such persons necessarily be subjected to exactly the same kind of examination as the young men just out of the school? Fortunately these questions have been answered in the negative by many boards of censors in the past, thereby securing to the society many brilliant men, professors in our medical schools, public health officials and the like, who, after years spent in the pursuit of some branch of special medical study, would have forgotten so much of their unused mental equipment as to be unable to pass a written examination in all branches and who would frankly refuse to try to do so.

In the less conspicuous ranks of the profession there are a good many men who have been doing creditable, honest work in some branch of medicine, acceptable to their patients and approved by their professional neighbors. The censors have agreed that one-half the total value of the examination shall be given to written and one-half to oral tests. In the former category alternative questions might be proposed to these candidates. Every live doctor, after ten years of practice, may know less about some branches than he did on graduating, but should know much more about others. Give him a chance to select the subjects he will write about. And in the "oral" part of the test let the evidence both from himself and his medical neighbors count largely as to his fitness for membership. Men who have worked in the same town or on the same street with him should be able to give a pretty good idea of what manner of man he is. The Board of Censors is responsible eventually for his acceptance or rejection, but the collection of evidence about his work and character, while it may involve more labor than a formal written test, may yet be the most useful part of the "examination." Moreover, while the law provides that the censors shall "examine," it leaves to their discretion what kind of examination in special cases is best adapted to learn the candidate's fitness.

It should be borne in mind that in many of the neighboring states the sole criteria for membership in the county and state societies are, (1) graduation from a good medical school, and (2) the passage of the state board examination, being two out of the three tests which, as above remarked, most of the qualified practitioners in Massachusetts must pass. Some of the censors are of the opinion that this would be an adequate requirement here. In that case the duty of the censors to "examine" would resolve itself into the verification of these two sorts of credentials and the investigation of the moral character of the candidate.

While the present system remains, however, it can be rendered more elastic, without any lowering of the intellectual or moral standard hitherto required, by simply recognizing in some cases the propriety of changing the methods of finding out the facts. The element of character should weigh heavily. In ten years of practise the character of a man has become pretty well fixed and can be generally better known than that of the neophyte who has been admitted to membership before he has had time to do much, good or bad. Only let us remember that if a person is to be admitted to the society in any degree upon his record, that record should be without a flaw. The advertiser, the fee-splitter, the abortionist, the pretender, should find the gate closed, the wall unscalable.

CHARLES F. WITHINGTON, M.D.,
President.

PTOSIS IN CHILDREN.

AN article on "Ptosis" by Dr. J. T. Williams, appearing in this issue of the JOURNAL, is a valuable review of the general subject and of methods of treatment.

It must be acknowledged that ingenious and skilful as have been the surgical attempts radically to correct the condition in adults, the results have not been as important or as uniform as could be desired. Other methods, medical, postural, mechanical, are purely palliative; and

if surgery fails we are forced to admit that well-marked cases will probably remain well-marked cases to the end of their days, to be relieved, perchance, of some of their discomforts, but not cured of the underlying condition. We speak now of the congenital visceral ptosis not of the acquired. The latter type while sometimes productive of quite as serious symptoms is more capable of cure.

Quite apart from the question as to whether congenital visceral ptosis is productive of symptoms in the child, its surprisingly common occurrence is a matter proved beyond cavil. It may be recognized not only by Roentgenological examination, but also by the general physical characteristics of the child. What shall we do about it? We may leave it alone and wait for growth and the upright position to increase the abnormality. On the other hand, after the child has assumed the upright position and an actual ptosis or a tendency to it is evident, we may strive by means of the development of muscles, by proper posture, and if necessary by means of mechanical supports to maintain a normal position of the viscera which growth will make permanent.

Though the symptom-complex of the condition frequently is associated with digestive upsets and malnutrition in children, it is in later life that we may expect fairly constant lack of physical endurance, the common "dyspepsias," and the occasional mental aberrations. We must admit the seriousness of the condition in the adult and the uncertainty of relief. If we can be persuaded of the possibility of cure in the child, surely this becomes a matter of preventive medicine whose importance can be measured only in terms of succeeding generations.

PROPOSED TRANSFER OF BOSTON QUARANTINE SERVICE.

IN last week's issue of the JOURNAL we commented editorially on the proposed transfer of the Boston Quarantine Service from municipal to federal control. This transfer was approved by the Boston Association for the Relief and Control of Tuberculosis. A special hearing on the subject was held on Friday, January 1, before the committee on ordinances of the Boston City Council. In a communication addressed to this committee on December 28 the Boston Finance Commission makes the following statements and expresses the following opinion, which, as evidence of the expert judgment of this body, seems of value in determining the attitude of others on this question.

"On April 21, 1914, the Finance Commission recommended to the executive committee of the City Council that the quarantine service of the Port of Boston be transferred to the United States Government.

"The Commission said in that report, 'The service (quarantine) of Boston is almost, if not quite, as important to adjacent cities and towns, to the state and to adjoining states, if not to the entire country, as it is to the port of Boston. Recent acts of Congress have recognized the fact that quarantine service is a matter of national concern. The Act of Congress of Feb. 15, 1893, provides that "whenever the proper authorities of a state shall surrender to the United States the use of the buildings and disinfecting apparatus at a state quarantine station, the Secretary of the Treasury shall be authorized to receive them and to pay a reasonable compensation to the state for their use if, in his opinion, they are necessary to the United States."' Under this provision various cities and states have transferred their quarantine functions to the general government. The only cities of any importance which have not done so are New York, Boston and Baltimore.

"While Baltimore maintains its own quarantine service, the federal government also has a station, located at Cape Charles, and thus has direct control over all quarantine cases before the vessels reach Baltimore. The only cities, therefore, that have no federal supervision over quarantine cases are New York and Boston, and inasmuch as the commission understands that arrangements are about to be perfected for the transfer of the city of New York quarantine service to the Washington Government, Boston will be the only city in the country that is not under federal control.

"Under the federal statutes property belonging to the local service, when transferred to the United States, is paid for by the latter, and if a special appropriation of Congress is necessary before purchase a rental is paid until such appropriation is made. Under these provisions the quarantine station at Boston, including the boats and other property, may be sold to the United States, and the competent men now engaged in the local service may, under proper observance of civil service rules, be transferred to the public health and marine hospital service. The transfer would make for uniformity and efficiency in quarantine work; would free the commerce of Boston from the payment of quarantine charges, and would relieve the city of a large expense.

"It is the opinion of the best medical authorities that the war conditions existing in Europe will result in the spread of contagious diseases to the United States. Such a condition in the near future further emphasizes the recommendation made by the Finance Commission.

"The present quarantine service of Boston is inadequate to cope with the contagious diseases which will soon reach the port of Boston, and there must be a large and immediate expenditure of money to equip the present quarantine service to meet this emergency.

"The personnel of the staff is competent, but the service of the federal government would be better, because of the fact that the latter would be enabled to work in unity with the quarantine service of the whole country.

"The Finance Commission repeats its opinion as contained in its report of April 21, 1914, and recommends that both the present ordinance abolishing the quarantine service of the Board of Health, and the order providing for the transfer of the quarantine property to the United States Government, now pending before your honorable committee, be reported favorably."

The executive committees of the Norfolk and Suffolk Districts of the Massachusetts Medical Society, and of the Boston Homeopathic Medical Society, representing a membership of about 1400 physicians, have also unanimously endorsed the proposed quarantine transfer.

AMERICAN COLLEGE OF SURGEONS.

THE third convocation of the American College of Surgeons was held in Washington, D. C., on November 16, 1914, with the President, Dr. J. M. T. Finney in the chair. In his introductory remarks Dr. Finney stated that the subscriptions to the proposed endowment fund of $1,000,000 already amount approximately to $250,000. The Secretary, Dr. Franklin H. Martin, in presenting the roll of candidates, conveyed to the Fellows the greeting of Sir Rickman Godlee, president of the Royal College of Surgeons of England, with the gift from him of a gavel designed and used by Lord Lister. The list of new Fellows numbered 646. The honorary Fellows were Dr. Dudley P. Allen of Cleveland, Ohio; Dr. William C. Gorgas, U. S. A., of Washington, D. C.; Dr. Lewis S. Pilcher of Brooklyn, N. Y.; Sir Thomas George Ruddick of Montreal; and Dr. J. William White of Philadelphia.

The fellowship address was delivered by Dr. Edward H. Bradford of Boston, Dean of the Harvard Medical School. Speaking on "The Higher Education in Surgery" Dr. Bradford expressed the opinion that the American College of Surgeons should become an important agency in the advancement of American surgery through its influence on the better education and training of surgeons.

After concluding remarks by Dr. Finney, the meeting adjourned to an informal reception. At the first annual meeting of the college held on the afternoon of the same day, a number of committees were appointed and the report of the committee on examination for membership was received. This report is printed at length in another column of this issue of the JOURNAL. There were addresses by the secretary, by Dr. Finney, Dr. John B. Murphy of Chicago, Dr. F. D. Gray of Jersey City, N. J., Dr. John W. Long of Greensboro, N. C., and Dr. G. Sterling Ryerson of Toronto.

The following officers were elected for the ensuing year:

President—Dr. J. M. T. Finney.
First Vice-president—Dr. W. W. Chipman.
Second Vice-president—Dr. Rudolph Matas.
General Secretary—Dr. Franklin H. Martin.
Treasurer—Dr. A. J. Ochsner.

LEGISLATION ON CARE OF TUBERCULOSIS IN MAINE.

AT the opening of the Legislature of the state of Maine, on January 6, a bill was presented before that body providing for the establishment of a sanatorium for the treatment of persons infected with tuberculosis who are unable to pay for their care. There are already several state institutions for the tuberculous in Maine, but none where poor patients can go without charge.

In their estimates for the years 1915 and 1916, which were filed at the office of the state auditor in Augusta, Me., on December 26, the directors of the Maine Association for the Relief and Control of Tuberculosis advocated the establishment of an institution for advanced cases and also of a commission to study and direct the work of tuberculosis prevention.

The proposed act referred to above, aims to carry out these recommendations. It provides for an institution to be known as the Maine State Sanatorium for Tuberculous Patients and to have a government vested in a board of hospital trustees.

"The proposed act also provides that all persons who are proper subjects for this sanatorium, who are unable to pay the fixed charges of the institution, upon recommendation of the municipal officers of the city or town of which the patient is a resident, may be admitted free of charge. All other persons who are proper subjects shall pay $4.50 per week.

"Under the bill, the board of hospital trustees shall select and purchase a suitable site for the sanatorium and shall proceed as soon as practicable to erect and furnish and equip suitable buildings. The bill carries $100,000 to be used within the next two years.

"As an alternative for the state to appropriate $35,000 for the year 1915 and $55,000 for the year 1916 for the sanatorium at Fairfield, the directors suggest that the state take over this institution, which has cost the Association about $25,000, the state to pay approximately $15,000 or a sum equal to the estimated indebtedness at the beginning of the year 1915 and that the institution at Fairfield be one of several of the kind which should be supported and managed by the state."

In the conclusion of their report the directors of the Maine Association for the Relief and Control of Tuberculosis speak as follows of the tuberculosis situation in that state:

"The fact that approximately 10 per cent. of the deaths in the state are from tuberculosis entitles this work and the suppression of this plague to an immediate and earnest consideration.

"The five years' experience of the members of this association has convinced us that the needs of the state in handling the tuberculosis situation are infinitely beyond the ability of private institutions or individuals to handle.

"The number of patients at the Fairfield Sanatorium is thirty. The present average cost of a patient is about $15 per week. With added equipment to care for sixty patients, and funds with which to take advantage of cash discounts and other economies, the cost could probably be reduced to $10 or $12 per week, which is the average cost in some of the large institutions in Massachusetts.

"Many applications have to be refused because patients pay but $2 or $3 per week, and a large number are refused because they can pay nothing. Many other applicants are refused because they are in an advanced stage of the disease and cannot be well treated in the same building with early cases."

MEDICAL NOTES.

LONDON DEATH-RATES IN NOVEMBER, 1914.—Statistics recently published show that the total death-rate of London in November, 1914, was only 14.6 per 1000 inhabitants living. Among the several districts and boroughs the highest rate was 20 in Finsbury, a populous central slum, and the lowest was 10.4 in Lewisham, an open southern section of the city.

APPOINTMENT OF DR. MOYNIHAN.— It is announced that Dr. Sir Berkeley Moynihan, of Leeds, England, has been appointed consulting surgeon with the British forces overseas, and left London for France on Dec. 4 to assume his duties.

AMERICAN UNIVERSITY REGISTRATION STATISTICS.—The registration statistics of thirty American universities for 1914, published in the issue of *Science* for Dec. 25, show that, including summer-session enrolment, the first eight are Columbia, California, Chicago, Wisconsin, Pennsylvania, Harvard, Michigan, and New York. Exclusive of summer students, the order is Columbia, Pennsylvania, California, Michigan, New York and Harvard. The largest medical school is that of New York, with 439 students. The Michigan medical school has 378, Johns Hopkins 374, Columbia 378, Tulane 343, Harvard 321, Pennsylvania 290, Illinois 287, and Ohio 281.

SANITARY PROGRESS IN NEW YORK.—Report from Albany, N. Y., states that on Dec. 25 the governing board of the state board of health issued an order forbidding the use of common drinking-cups and roller-towels in public places, and fixing sanitary rules to govern barber shops, manicure parlors, and chiropodist offices. This order is essentially the same as those already adopted in several other states and enforced on interstate railroad trains.

MEDICAL STUDENTS IN SWITZERLAND.—In the summer of 1914 the total number of medical students in the Swiss universities was 2205, of whom 327 were at Bâle, 117 at Berne, 879 at Geneva, 316 at Lausanne, and 566 at Zürich.

OREGON EUGENIC MARRIAGE LAW.—An item in the Philadelphia *Bulletin* notes that a recent convention of county officials in Oregon voted its unanimous disapproval of the present so-called eugenic marriage law in that state, requiring a physical examination of all male applicants for matrimonial licenses. Its repeal is advocated on the ground that it has proved ineffective and even harmful.

THE EPIZOÖTIC OF FOOT AND MOUTH DISEASE.—On Dec. 23 the federal quarantine for foot and mouth disease among cattle was raised from the following counties of Illinois: Alexander, Bond, Calhoun, Crawford, Clay, Clinton, Edwards, Effingham, Fayette, Franklin, Gallatin, Hamilton, Hardin, Jackson, Jasper, Jefferson, Jersey,

Johnson, Lawrence, Macoupin, Madison, Marion, Massac, Montgomery, Monroe, Perry, Pope, Pulaski, Randolph, Richland, St. Clair, Saline, Union, Wabash, Washington, Wayne, White and Williamson.

In the following counties, upon which the quarantine is modified, cattle may be received and shipped for immediate slaughter: Brown, Clarke, Christian, Cumberland, Greene, Pike, Shelby and Scott.

An absolute quarantine was ordered against Tucsola county, Mich., and Tioga county, N. Y.

In Connecticut the quarantine has been modified over all the state, except the counties of New Haven and Hartford, to permit the cattle to enter for any purpose and to be shipped out for immediate slaughter.

POLIOMYELITIS IN VERMONT.—The weekly report of the United States Public Health Service for Dec. 18 states that during October, 1914, there were 55 cases, and during November, 9 cases of poliomyelitis in Vermont.

CHOLERA IN SILESIA.—During the fortnight from Nov. 15 to 28 inclusive, 1914, 33 cases and 9 deaths of Asiatic cholera were reported among troops of the Austrian army in Silesia, Germany.

TUBERCULOSIS CAMPAIGN COSTS TWENTY MILLIONS.—The annual statistical statement of the National Association for the Study and Prevention of Tuberculosis, issued on Jan. 2, shows that over $20,500,000 were spent last year in the campaign against tuberculosis in the United States. Of this sum, 66.8 per cent. was derived from public funds, either federal, state, county or municipal, and the remainder was contributed by private philanthropy.

Institutional care and treatment of consumptives in hospitals and sanatoria makes up the largest share of the total expenditures. More than $17,300,000 were spent for this purpose, with an additional $925,000 for special treatment of tuberculous insane and prisoners. These figures include not only the cost of maintenance, but in some instances the cost of construction of institutions. Anti-tuberculosis associations spent the next largest sum, amounting to a little over $900,000. Care of patients in dispensaries and by visiting nurses cost almost as much, approximately $860,000. The growth of the open air school movement is shown in the fact that last year more than $300,000 were spent for this purpose, as against $10,000 expended five years ago. State and city boards of health spent $200,000 directly on tuberculosis work.

In the last five years, the percentage of money spent from public funds has steadily increased from 53 per cent. in 1909 to 69.3 per cent. in 1913, and 66.8 per cent. last year. The National Association considers this increase significant, since it indicates a shifting of the burden of institutional care of the consumptive from the private purse to the general public purse where it rightly belongs.

New York spent more money last year in the tuberculosis campaign than any other two states in the Union, due largely to the increased and rapidly-developing movement for city and county care of the tuberculous. Pennsylvania, which has occupied second place for the past four years, was superseded last year by Illinois, with Massachusetts in fourth place and Colorado in fifth place.

EUROPEAN WAR NOTES.—In a recent letter to the public daily press, Mr. Robert Bacon has called renewed attention to the needs of the American Ambulance Hospital at Paris:

"The American Ambulance Hospital in Paris has cabled an urgent appeal for more volunteers to drive motor ambulances in France; 180 men and 100 ambulances are wanted as soon as possible.

"A word of explanation of what the American hospital is: Its present organization consists of the main hospital at Neuilly, on the outskirts of Paris, located in the Lycée Pasteur building, which had just been completed at the outbreak of the war. It is at present equipped with about 450 beds. A second hospital unit has also been established at a point nearer the firing line, about 20 miles from Paris. This contains about 200 beds.

"In addition there is a flying ambulance corps, consisting of about 60 motor ambulances.

"To enlarge this work and increase its effectiveness a call for volunteers is now made. The reports from the surgeons working in the hospital show that the majority of the cases brought to them have been so delayed in reaching medical assistance that gangrene and blood poisoning have frequently unnecessarily set in, and that some of those only slightly wounded have succumbed because of inattention before reaching the hospital.

"To date each ambulance has averaged the transportation of over 50 wounded a day, and there are many emergency calls when they are pushed to the fullest extent of their endurance. It is not especially easy work, and every volunteer is subject to the military discipline of the organization."

Report from Philadelphia on Dec. 28 states that Dr. J. William White, a trustee of the University of Pennsylvania, has announced that the university is preparing to send to Paris eight or ten surgeons to take charge of a ward of the American Ambulance Hospital, endowed by Philadelphia citizens.

Report from Cleveland, Ohio, on Dec. 28 announced plans for an expedition to be sent to the American Ambulance Hospital, Paris, by the Western Reserve Medical School and Lakeside Hospital, and on Dec. 30 this expedition sailed for Europe. The expedition is to be

financed by trustees and other friends of the two institutions. Its personnel will consist of Dr. George W. Crile, professor of surgery, Western Reserve University, and visiting surgeon of Lakeside Hospital; Dr. Samuel L. Ledbetter, Dr. Edward F. Kieger and Dr. Le Roy B. Sherry, now of the resident staff of Lakeside Hospital, who will act as assistant surgeons and clinical assistants; Dr. Lyman F. Huffman of the resident staff of Lakeside Hospital, who will act as clinical pathologist; Dr. Charles W. Stone, assistant professor of nervous diseases in Western Reserve University, and visiting neurologist of Lakeside Hospital; Miss Agatha Hodgins and Miss Mabel L. Littleton, anesthetists; Miss Iva B. Davidson and Miss Ruth J. Roberts, from the operating-room staff of Lakeside Hospital.

Dr. Crile takes with him also, to assist in a special research, Miss Amy F. Rowland, B.S., Mt. Holyoke College, and William J. Crozier, Ph.D., Edward Austin Fellow of the department of zoölogy of Harvard University.

On Jan. 1 the total of the New York Belgian relief fund amounted to $697,416.17; the New York Red Cross fund to $415,019.83; the German relief fund to $323,050.00; and the American Jewish relief fund to $237,881.93.

The New England Belgian relief fund amounted to $164,086.89; the Massachusetts Red Cross fund to $94,416.22; the Boston branch of the American Ambulance Hospital fund to $48,793.95; the Boston Jewish relief fund to $23,647.85; the Russian relief fund to $9570.00; and the Polish relief fund to $9052.91.

BOSTON AND NEW ENGLAND.

Smallpox in Everett.—Report from Everett, Mass., states that two cases of smallpox were discovered in that town on Dec. 27. The couple have been isolated in their home, and about 350 contacts were vaccinated.

Fire in New Haven Hospital.—Report from New Haven, Conn., states that on Dec. 27 a fire broke out in the Grace Hospital of that city. The seven patients in the portion of the building involved were rescued by nurses. The damage is estimated at $10,000.

New England Baptist Hospital Training School.—The trustees of the New England Baptist Hospital have issued invitations to the graduation exercises of their training school for nurses to be held on Thursday evening, Jan. 7, 1915, at 8 o'clock, in Kingsley Hall, Ford Building, corner of Bowdoin Street and Ashburton Place, Boston. The principal address will be made by Dr. Joel E. Goldthwait, of Boston, and diplomas will be presented to a class of nine nurses by Colonel Edward H. Haskell, president of the board of trustees. Dr. George S. C. Badger, chairman of the training school committee, will preside.

Hospital Bequests.—At the recent 35th annual meeting of the Lynn (Mass.) Hospital, announcement was made of a gift of $100,000 for a nurses' home from Mrs. Luther S. Johnson, of that city.

The will of the late Sara E. Woodworth, of Boston, filed in the Suffolk probate court on Dec. 26, contains a bequest of $6000 to the Free Hospital for Women, Brookline, Mass.

Cases of Infectious Diseases reported to the Boston Board of Health for the week ending Dec. 29, 1914: Diphtheria 66, of which 1 was non-resident; scarlatina 40, of which 6 were non-resident; typhoid fever 4; measles 50; tuberculosis 43, of which 4 were non resident. The death-rate of the reported deaths for the week was 16.95.

Current Literature

Medical Record.

December 19, 1914.

1. Fauntleroy, P. C. *Gun-shot and Shell Wounds.*
2. Mabbott, J. M. *Infant Feeding with Top Milk.*
3. Rankin, E. G. *The Readings of the Sphygmomanometer from a Clinical Standpoint.*
4. Brodsky, E. S. *Delirium Grave with Report of Three Cases and Differential Diagnosis.*
5. Dana, C. L., and Elsberg, C. A. *Cyst of the Cerebello-Pontine Angle; Operation with Relief of Symptoms.*
6. *Lumbard, J. E. *A New Method for the Control of Post-Anesthetic Nausea.*
7. Pabst, C. F. *Why Fumigation Fails.*

6. Lumbard holds that the chief factor in the causation of nausea and vomiting after ether or other anesthetics is the smell of the anesthetic. He has devised a cigarette-shaped piece of gauze which can be fastened to the face by adhesive plaster in such a way that it just projects beyond the tip of the nose. By keeping this gauze saturated during an operation with some pleasant perfume, *e.g.* oil of bitter orange peel, he has been uniformly successful in preventing post-anesthetic nausea. [L. D. C.]

New York Medical Journal.

December 19, 1914.

1. Evarts, A. B. *Report of a Case of Aphasia and Apraxia.*
2. Lerch, O. *Glenard's Disease.*
3. Robinson, W. J. *Gonorrheal Epididymitis and Its Non operative Treatment.*
4. Fox, H. *Cirrhosis of the Liver in Wild Animals.*
5. Frank, J. *Penetrating Gunshot Wounds of the Abdomen.*
6. Fauz, J. I. *Phenolsulphonephthalein Renal Function Test.*
7. Abrhams, R. *Autoserum Injections in Streptococcic Endocarditis.*
8. Bates, F. D. W. *Eye-strain in the Development of Tuberculosis.*
9. Skilern, P. G., Jr. *Sulphurous Acid in the Treatment of Furuncles.*
10. Sonnenschein, H. D. *The Treatment of Chronic Leg Ulcers.*

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

SEPTEMBER, 1914.

1. *SCHMIDT, A. *Severe Anemia Connected with Gastro-intestinal Diseases.*
2. ANDERS, J. M., AND JAMESON, L. H. *The Relation of Glycosuria to Pituitary Disease and the Report of a Case with Statistics.*
3. *FITZ, R. *The Value of Tests for Renal Function in Early and Advanced Bright's Disease.*
4. *SCHLEITER, H. G. *Observations on the Intravenous Use of Strophanthin with Regular and Irregular Pulse Rhythms.*
5. *GOODMAN, E. H., AND LUDERS, C. W. *The Value of Colonic Inflation in the Diagnosis of Chronic Appendicitis.*
6. MORGAN, W. G. *Duodenal Alimentations.*
7. *STOLL, H. F., AND HEUBLEIN, A. C. *Tuberculosis of the Bronchial Glands and Lung Hilus: A Clinical and Radiographic Study.*
8. WILLIAMS, E. M. *Hereditary Ataxia*
9. *HOPKINS, J. G., AND ZIMMERMANN, J. B. *Cholesterin Antigens in the Wassermann Reaction and the Quantitative Testing of Syphilitic Sera.*
10. CAMPBELL, R. P., AND OWER, J. J. *An Unattached Mass Found in the Abdominal Cavity of a Male.*
11. EMSHEIMER, H. W. *The Value of Petechiae in Diagnosis and Prognosis.*
12. BRIGGS, LER. H. *The Neutrophilic Blood Picture in Pernicious Anemia: A Preliminary Report.*

1. Schmidt contributes a careful discussion of the evidence as to the etiology of pernicious anemia, with special reference to that suggesting that a hemolytic agent derived from the gastro-intestinal tract is responsible, at least in some of the cases. It is shown that the gastric achylia in certain instances has been proved to exist before the appearance of the anemia, and that the diarrhea present in a third of a series of cases preceded the development of the anemia by many years. While no constant anatomical changes are demonstrated, the author supports the view that degenerative changes in the mucous membrane of the small intestine produce hemolytic lipoids, which have been extracted by Berger and Tsuchiya in his laboratory. In treatment he advises a diet avoiding irritants, finely divided and easily assimilable, limiting carbohydrates or proteins according as the stools are acid and fermenting or alkaline and putrefactive. Stress is laid upon the regular use of hydrochloric acid with meals and upon gastric and duodenal lavage.

3. Fitz's paper deals first with Schlayer's tests of renal function, by which, as in illustrative cases, it is shown that delayed excretion of lactose, injected intravenously or intramuscularly, is indicative of vascular nephritis, whereas delayed outputs of sodium chloride and of potassium iodide point to tubular nephritis. These tests have been shown to reveal abnormal conditions in advance of clinical symptoms which have later developed. Of wider application in determining the severity of the disorder in cases with symptoms, however, is the phenolsulphonephthalein test, by means of which with few exceptions information may be obtained as to the total renal function. To minimize the occurrence of error in these exceptions more than one test must be used. The determination of the incoagulable nitrogen and urea in the blood is of importance. Determinations of signs of acidosis in blood, urine and expired air may prove of significance. By the results of these tests the dietetic treatment may be made more rational, giving a salt-poor diet in cases with poor chloride elimination, limiting protein in cases unable to excrete nitrogen, and giving alkalies in cases with acidosis.

4. Schleiter reports upon a series of cases given intravenous doses of strophanthin, some being cases with regular hearts, while others were cases of auricular fibrillation or other irregularities. While the tracings given are not all conclusive of the diagnoses, and little attention was paid to the effect on blood-pressure, the observations are of distinct interest. It is concluded that the action of strophanthin administered intravenously is similar to that of other members of the digitalis group administered orally, but more rapid. It showed a decisive effect in all cases of auricular fibrillation, and is recommended in severe cases of this condition to tide the patient over until digitalis by mouth takes effect. In the series with regular hearts its action was not striking. The maximum dose is 1 mgm. In two cases of paroxysmal tachycardia its use was followed by cessation of the attack.

5. Goodman and Lüders have applied Bastedo's test of colonic inflation to induce tenderness at McBurney's point, proposed as a sign of chronic appendicitis. While they failed to obtain a positive test in any of 75 control cases, in three with abdominal symptoms who reacted positively, no appendicular lesion was found. Twelve of the negative cases had diseased appendices, five having acute appendicitis. They conclude that the test is not without value, but that it should be regarded as merely an aid to diagnosis to be given only minor consideration.

7. Stoll and Heublein discuss the occurrence and diagnosis of tuberculous bronchial glands, particularly in children. They conclude that up to the fifteenth year this is the commonest form of tuberculosis. The early symptoms are chiefly toxic, although cough is generally present. Signs of apical disease are not to be expected. The most significant sign in their opinion is whispered bronchophony over thoracic vertebrae as described by d'Espine.

9. Hopkins and Zimmermann have done a large number of Wassermann reactions comparing the lipoid and the cholesterin antigens. The results seem to show that the cholesterin antigens, while increasing the sensitiveness of the test, involve a risk of error which should not allow them to be used to the exclusion of the less sensitive extracts of the original test.

[F. W. P.]

OCTOBER, 1914.

1. *MILLER, J. L. *The Clinical Value of Expectorants.*
2. *HALL, J. N. *Relative Pulmonic Insufficiency.*
3. *TAUSSIG, F. J. *The Prevention and Treatment of Vulvovaginitis in Children.*
4. *EINHORN, H. *Direct Examination of the Duodenal Contents (Also Bile) as an Aid in the Diagnosis of Gall-bladder and Pancreatic Affections.*
5. COLLINS, J., AND BAEHR, E. *Disseminated Sclerosis*
6. FETTEROLF, G., AND ARNETT, J. H. *A Case of Sprengel's Deformity.*
7. NILES, G. M. *Some Remarks on the Treatment of Amebic Dysentery.*
8. LANDIS, H. R. M., AND KAUFMANN, I. *The Diagnosis of Tuberculosis in Early Life.*
9. *FRIEDMAN, G. A. *The Difference in the Morphology of Blood in Gastric Ulcer, Duodenal Ulcer and in Chronic Appendicitis, Based Upon Fifty Operatively Demonstrated Cases.*
10. ORBISON, T. J. *Myopathy: With Clinical Records of Eight Cases Comprising Various Types.*
11. *HOWELL, A. A. *The Use of Pituitary Extract in the Control of Some of the Associated Symptoms of Pneumonia Which Favor Hypotension.*
12. WILLIAMS, T. A. *The Traumatic Neuroses.*
13. WOHL, M. G. *Granuloma Fungoides.*

1. Miller has conducted experiments with the object of testing the influence of expectorant drugs upon the bronchial secretion in dogs. While his results are not convincing as to the action of the drugs in man, he concludes that ammonium carbonate, ammonium chloride, apomorphine and ipecac when given in sufficiently large doses to animals increase bronchial se-

cretion, but that in doses equivalent to ordinary human therapeutic doses no increase occurred.

2. Hall calls attention to the occurrence of relative pulmonic insufficiency, especially in advanced cases of mitral stenosis, a condition which has been seldom mentioned in the literature. He believes it to be found in perhaps 3 to 5% of the cases of mitral stenosis. It is to be detected by the presence of a soft diastolic murmur in the pulmonic area, disappearing as compensation is regained but reappearing as decompensation reappears; with exertion or with expiration, particularly with the glottis closed, it is intensified. The pulmonic second sound is commonly enfeebled.

3. Taussig has investigated 66 cases of vulvovaginitis in children. In the etiology he finds reason to suspect that infection from the lavatory seat is an important factor. In treatment he had the best success with, in acute cases, rest in bed for two weeks with injections of 25% argyrol twice a day; in the second and third weeks the argyrol was replaced by 1% silver nitrate, later changed to 2%, or even 4%, at increasing intervals, until there is no discharge for a month. He urges the adoption of public health measures to diminish the spread of the disease from one child to others.

4. Einhorn reports deductions from his experience with duodenal contents withdrawn by tube for examination The macroscopic appearance of bile is of significance, golden yellow clear bile usually indicating a normal gall-bladder, whereas fresh bile that is greenish yellow and somewhat turbid suggests disease of the gall-bladder and gall-stones. Study of ferments permits gauging pancreatic function. Constant absence of one ferment usually indicates chronic pancreatitis. Absence both of bile and of pancreatic juice suggests obstruction at the papilla, whereas absence of bile only shows a higher obstruction.

9. Friedman attempts to show differences of diagnostic value in the blood pictures of gastric ulcer, duodenal ulcer and appendicitis. His results, however, are not sufficiently constant to deserve more than partial reliance in clinical diagnoses.

11. Howell advocates the use of pituitary extract in pneumonia, not only for its direct effect in raising and supporting blood pressure, but also on account of its action in combating tympanites. He feels that the existence of diarrhea should not be taken as a contraindication. [F. W. P.]

NOVEMBER, 1914.

1. *CLARK, J. G. *Ultimate Results Secured from Surgical Intervention in Simple Cases of Cholelithiasis Discovered During Operations for Other Conditions.*
2. FRIEDENWALD, J. *A Clinical Study of One Thousand Cases of Cancer of the Stomach.*
3. *LICHTY, J. A. *Some Clinical Aspects of Gastric Hemorrhage.*
4. GRULEE, C. G. *Laboratory Diagnosis in the Early Stages of Congenital Syphilis.*
5. *SACHS, B., STRAUSS, I., AND KALISKI, D. J. *Modern Methods of Treatment of Syphilis of the Nervous System.*
6. CALLENDER, G. R. *Cardiac Syphilis: Report of a Case.*
7. *VEEDER, B. S. *Duodenal Ulcers in Infancy.*
8. BROOKS, H. *Effects of Heredity in Bovine Tuberculosis.*
9. *CHURCHMAN, J. W. *Notes on the Examination of the Urine for Tubercle Bacilli.*
10. *COCKE, C. H. *Albumin in the Sputum in Tuberculosis: Its Value in Diagnosis and Prognosis.*

1. Clark's article is in the main a protest against the older teaching that in a large proportion of cases gall-stones cause no symptoms. He urges their removal whenever their presence is known.

3. Lichty calls attention to the occurrence of severe hemorrhages in gastric and duodenal ulcer when food by mouth has been withheld. He concludes that in acute ulcer or in acute exacerbations of chronic ulcer, feeding by mouth should not be suddenly discontinued.

5. Sachs, Strauss and Kaliski report upon 120 cases of syphilis of the nervous system treated by them, in part by salvarsan intravenously supplemented by mercury, and in part by intraspinous use of salvarsanized serum. The latter treatment, however, does not seem to them to possess advantages over the intravenous method. With regard to results the authors feel that in tabes dorsalis in most cases the subjective condition of the patient can be greatly improved and the progress of the disease checked. In cerebral and cerebrospinal lues the results of salvarsan treatment combined with mercury were better than were secured by any previous methods. The results in general paresis were less satisfactory.

7. Veeder reports five cases of duodenal ulcer in infants, four with autopsy, and summarizes the literature.

9. Churchman reports two observations of interest: the finding of tubercle bacilli by examination of washings of the bladder in a case of tuberculous ulcer, and the finding of tubercle bacilli in the urine of a case proved by autopsy to be general miliary tuberculosis.

10. Clark, from a small series of cases and from the literature, concludes that the test for albumin in the sputum in tuberculosis deserves a wider application, with reference both to diagnosis and to prognosis. In diagnosis its worth is still unproved and its presence may be misleading; it seems, however, to be positive in all cases of tuberculosis where the sputum is positive, and in general to vary in amount of albumin, according to the degree of the exudative or destructive process. [F. W. P.]

DECEMBER, 1914.

1. *THAYER, W. S., AND SNOWDEN, R. R. *A Comparison of the Results of the Phenolsulphonephthalein Test of Renal Function with the Anatomical Changes Observed in the Kidneys at Necropsy.*
2. *WILSON, L. B., AND MCDOWELL, I. E. *A Further Report of the Pathologic Evidence of the Relationship of Gastric Ulcer and Gastric Carcinoma.*
3. *MOFFITT, H. C. *Studies in Pernicious Anemia.*
4. *LYNCH, J. M., AND DRAPER, J. W. *Anastalsis and the Surgical Therapy of the Colon.*
5. *MCCRAE, J. *The Subcutaneous Injection of Oxygen as a Therapeutic Measure.*
6. CROHN, B. B. *New Growths Involving the Terminal Bile and Pancreatic Ducts: Their Early Recognition by Means of Duodenal Contents Analyses.*
7. *PALMER, W. W. *The Absorption of Protein and Fat after the Resection of One-Half of the Small Intestine.*
8. HOLDING, A. F. *The Roentgenologic Method of Differentiating Between Ulcer and Cancer of the Stomach and Duodenum.*
9. WARFIELD, L. M. *Further Observations on Diastolic and Pulse Pressure.*
10. LYON, B. B. V., AND EIMAN, J. *A Centrifuge Method to Produce a Uniform Standard for Wassermann Readings.*

1. Thayer and Snowden report a study of 54 cases in which the phenolsulphonephthalein test of renal function performed a variable period before death has been compared with the condition of the kidneys at autopsy. In cases of severe chronic nephritis a low phthalein output was found in all. In cases of chronic passive congestion from heart disease the phthalein elimination was often considerably reduced, but as a rule rose with the establishment of circulatory compensation. In the few instances of chronic nephritis

of moderate extent the phthalein excretion was considerably reduced. In one case of acute nephritis and in one case of amyloid disease the excretion was greatly reduced, and in some instances of cloudy swelling in acute infections considerable reductions were observed. The article lends strong confirmation to the value, both diagnostic and prognostic, of the test.

2. Wilson and McDowell report that of 399 cases of gastric cancer in which resections were performed, 52% showed definite evidence of association with ulcer; while in the remainder the evidence of association with ulcer was not conclusive, from a study of clinical histories combined with examination of surgical and autopsy specimens, it is concluded that gastric cancer rarely develops except at the site of a previous ulcerative lesion.

3. Moffitt reviews the literature of splenectomy in pernicious anemia, collecting 31 reported cases, to which he adds two original ones. While he agrees with Klempirer and von Decaslello that we have in the operation a means of bringing about a remission of the disease fairly certain when other means have failed, the facts that 8 of the 33 cases died immediately or soon after ths operation and that certain cases have not been benefited, together with the fact that improvement may occur without treatment, even in the worst cases of pernicious anemia, are to be considered before splenectomy is advised.

4. Lynch and Draper discuss the subject of surgical alterations of the course and function of the colon, and describe operations which they propose to avoid the harmful effects of ileosigmoidostomy and other similar procedures as they have hitherto been performed.

5. McCrae reports his experience with the subcutaneous injection of oxygen. While the results in eleven cases of pneumonia were disappointing, in cardiac and renal dyspnea notable relief was usually obtained. It seemed of benefit also in accidents of anesthesia, edema of the lungs and glottis, obstruction of the upper respiratory tract, asphyxia at birth, syncope and electrocution.

7. Palmer from study of a case of extensive resection of the small intestine records the following observations: The loss of nitrogen in the stools was four and five times the normal, and the loss of fat five to six times the normal. There was a high urinary indican. Ammonia formed a much larger part of the urinary nitrogen than normal. [F. W. P.]

THE ARCHIVES OF INTERNAL MEDICINE.

SEPTEMBER, 1914.

1. SILER, J. F., GARRISON, P. E., AND MACNEAL, W. J. *Introduction to the Second Progress Report of the Thompson-McFadden Pellagra Commission.*
2. *SILER, J. F., GARRISON, P. E., AND MACNEAL, W. J. *A Statistical Study of the Relation of Pellagra to Use of Certain Foods and to Location of Domiciles in Six Selected Industrial Communities.*
3. GREENWALD, I. *Nitrogen and Sulphur Metabolism in a Cretin.*
4. *STAINES, M. E., JAMES, T. L., AND ROSENBERG, C. *Lymphocyte Increase and Altitude.*
5. MAJOR, R. H., AND NOBEL, E. *The Glycyltryptophan Reaction in Meningitis.*
6. BISHOP, F. W. *Elliptical Human Erythrocytes.*
7. MEMSON, J. F., AND SHAW, A. L. *The Pituitary Gland in Epileptics.*
8. *BATHERWICK, N. R. *The Specific Rôle of Foods in Relation to the Composition of the Urine.*

2. Siler, Garrison and MacNeal present the first of a series of papers dealing with several phases of the work of the Thompson-McFadden Pellagra Commission in 1913. This paper deals with the relation of pellagra to certain foods and to location of dwelling, as studied by the writers in six cotton-mill villages in South Carolina. They found that the disease spread from a pre-existing case as a center in these six villages. It was transmitted to new victims only through very short distances and chiefly to those immediately associated in the home with a pre-existing case. Frequent use of corn-meal as an article of diet was found not to be an etiological factor in these cases. No evidence was discovered that canned goods have anything to do with the causation of pellagra. Frequent, even daily, use of fresh meat and of eggs afforded no relative protection from the disease. The daily use of milk seemed to diminish somewhat the danger of contracting pellagra.

4. Staines, James and Rosenberg studied the effect of changes in altitude on the lymphocytes of the blood in students and monkeys. They find that at an elevation of 6000 feet the larger lymphocytes are absolutely increased by at least 20%. The basophilic mononuclear elements in the blood at sea-level are about 34%, and at 6000 feet about 42%. The total leucocyte count is approximately the same at both levels. The total polymorphonuclear cells diminish in number in exact proportion to the increase in the number of mononuclears. There is an increase of 22% in the number of erythrocytes at an altitude of 6000 feet.

8. Batherwick reports on an elaborate study of the influence of foods on the composition of the urine. The true acidity of the urine is due to an excess of H+ ions in the excretion. A surplus of OH ions produces alkalinity, and when there is an equal number of H+ and OH ions present the solution becomes neutral. An increase in H+ is accompanied by a significant increase in the ammonia excretion. The solubility of uric acid in urine is closely dependent on the H+. All urines with an acid reaction are supersaturated with uric acid, while alkaline urines are capable of dissolving added uric acid. Foods with a predominance of acid-forming elements increase the urinary acidity. Rice and whole-wheat bread increase urinary acidity. Plums, prunes and cranberries, although yielding a basic ash, nevertheless increase the acid formation because of their benzoic acid content, hippuric acid being formed. Foods which have a preponderance of basic elements lead to the formation of a less acid urine. Potatoes, oranges, raisins, apples, bananas and cantaloups are very efficient in reducing the acid output. Tomatoes are of less value in this respect. [L. D. C.]

OCTOBER, 1914.

1. *SILER, J. F., GARRISON, P. E., AND MACNEAL, W. J. *The Relation of Methods of Disposal of Sewage to the Spread of Pellagra.*
2. BRIDGMAN, E. W. *Notes on a Normal Presystolic Sound.*
3. LAMB, A. R. *Periarteritis Nodosa—A Clinical and Pathological Review of the Disease. With a Report of Two Cases.*
4. WESSLER, H. *Latent Hypertrophy of the Heart in the Nephritis of Children.*
5. *FRIEDMAN, J. C., *and* STROUSE, S. *The Non-Specificity of Carbohydrate Tolerance Tests.*
6. *ROSENBLOOM, J., AND ANDREWS, V. L. *The Potassium Content of Cerebrospinal Fluid in Various Diseases.*
7. FROTHINGHAM, C., JR., AND SMILLIE, W. G. *The Relation Between the Phenolsulphonephthalein Excretion in the Urine and the Non-Protein Nitrogen Content of the Blood in Human Cases.*
8. ROSS, E. L., AND SINGER, H. D. *A Point to be Considered in the Use of the Abderhalden Reaction.*
9. *WALKER, I. C. *The Specificity of Cholesterin with Syphilitic Sera and of Cholesterin-Reinforced Heart Antigen in the Wassermann Reaction.*
10. *WILBUR, R. L., AND OPHÜLS, W. *Botulism: A Report of Food-Poisoning Apparently Due to*

Eating of Canned String Beans, with Pathologic Report of a Fatal Case.

11. BLUMER, G. *A Note on the Normal Peculiarities of the Heart-Sounds in the Region of the Sternum.*

1. Siler, Garrison and MacNeal studied the relation of methods of disposal of sewage to the spread of pellagra in South Carolina. They found that pellagra morbidity was higher in congested communities using surface privies than in more sparsely settled districts in which similar methods for the disposal of excreta were employed. In the city of Spartanburg the endemic foci of pellagra were located in the districts in which surface privies were in use. In cotton-mill villages equipped with surface privies pellagra was found to be endemic and new cases arose there year after year. In two villages completely equipped with water-carriage systems of sewage disposal it was impossible to find cases which had certainly originated there. Some evidence was found that pellagra spreads in hospitals for the insane more readily in the wards housing untidy patients. The writers conclude that methods of disposal of human wastes may be a determining factor in the spread of pellagra and such means of prophylaxis against this disease should be thoroughly tested.

5. Friedman and Strouse made a clinical study of carbohydrate tolerance tests in a large number of cases in which a functional disturbance of any of the ductless glands was thought to exist. They conclude that while these tests may indicate in a general way functional disability of an organ under suspicion, they can never be interpreted in an absolutely specific manner, for other organs may be involved. Functional inefficiency of one gland sufficient to lower the threshold of carbohydrate metabolism may be entirely compensated for by functional hyperactivity of a correlated gland.

6. Rosenbloom and Andrews estimated the potassium content of the cerebrospinal fluid in normal persons and in cases of paresis, cerebrospinal syphilis, dementia precox, alcoholism, meningitis, encephalitis, typhoid fever and neurasthenia. They find that the potassium content is not increased in degenerative diseases of the cerebrospinal system but is high in the acute cases. The test, however, is of no material value in diagnosis. According to the writers' observations, the potassium content of uncentrifuged cerebrospinal fluid was higher than that of centrifuged fluid. No relation was found, however, between the number of cells in the fluid and its potassium content, or between the potassium content and the globulin reaction.

9. Walker presents clinical evidence to show that cholesterinized alcoholic extracts of human heart have a specific fixation property with syphilitic sera and that they do not give non-specific fixation with non-syphilitic sera, provided the re-agents are accurately titrated. The serum of a syphilitic patient contains something for which cholesterin has a definite fixation power in the presence of complement.

10. Wilbur and Ophüls report twelve cases of botulism, one fatal, due to the eating of domestically prepared canned string beans served without preliminary heating. The methods of sterilization under pressure in use by canning factories seem to prevent the growth of B. botulinus in their pack. In the fatal case reported the gross autopsy findings were negative except for moderate hyperemia of the cerebral vessels, especially at the base of the brain and in the region of the fourth ventricle. There was marked hyperemia of the viscera, especially the liver, kidneys and intestines, and bronchopneumonic lesions in the lungs. Microscopic examination of the brain showed many vascular thromboses, especially about the brain stem and involving the nuclei of most of the cranial nerves. Such lesions explain the clinical phenomena better than the hypothesis of a specific action of botulin on certain ganglion cells. [L. D. C.]

DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

No. 36. SEPTEMBER 3, 1914.

1. STRAUSS, H. *The Dietetic Treatment of Hyperacidity, Hypersecretion and Peptic Ulcer.*
2. KULENKAMPFF, D. *Recent Progress in Inhalation Anesthesia.*
3. *TSCHERTKOFF, J. *Indicanemia and Uremia.*
4. *HAFEMANN, G. *The Albumin Content of Tuberculous Sputum.*
5. RAUDNITZ. *A Substitute for Milk of Almonds.*

3. Tschertkoff has tested the blood serum for the presence of indican as a sign of impending uremia. The method used consisted in precipitating the albumin with trichloracetic acid, filtering, and testing the filtrate for indican by Obermayer's re-agent. At the same time the blood urea was estimated. Tschertokoff finds that in nephritis without renal insufficiency there is never a significant urea retention nor is indican present in the serum. When, however, the blood urea reaches a certain concentration, indicanemia is found. Thus indican in blood serum affords the same unfavorable prognostic information as increased blood urea.

4. Hafemann has analyzed the albumin content of 171 sputa, and has compared these findings with sputum examination for tubercle bacilli. From his results, he concludes that more than one albumin test must be made to allow for any deductions, and that if bacilli are found, albumin is always present. He feels that the most probable reason for this is that the albumin content of sputa depends on metabolic products of the tubercle bacillus. [R. F.]

No. 37. SEPTEMBER 10, 1914.

1. *BRENTANO, A. *The Treatment of Gun-shot Wounds of Bones and Joints.*
2. EDITORIAL. *Surgical Experience in the Russo-Japanese War.*
3. CRONER, F. *The Sterilization of Drinking Water in the Field.*
4. HOENE. *An Unusual Case of Bechterew's Disease (Spondylitis Achylopoetica Chronica).*
5. *KROMAYER. *Defects in the Salvarsan Treatment of Syphilis.*
6. ORLOWSKI. *Do Sterile Gonorrheal Shreds Cause Leucorrhea?*

1. In the field, Brentano has found that infected wounds are of two types. The first is caused by the introduction of an infecting agent at the time the wound is made. The second is caused by organisms which are introduced into the wound during treatment. To avoid the latter infections all wounds at first must be treated as though sterile. Dry aseptic dressings should be applied and such bandages as to make the affected parts as comfortable as possible. If subsequent infection develops, drainage is indicated, and amputation as a final resort. On the whole, the infections which Brentano has seen have been relatively mild. Tetanus and erysipelas were rare, gas bacillus and pyocyaneus infections were somewhat commoner, but ordinary pus infections were seen most frequently.

5. Kromayer recalls that until four years ago, mercury was used commonly during the past three centuries in the treatment of syphilis. It has acted quickly and effectively in 90% of the cases treated and has been used over long periods of time without ill effect. Four years ago salvarsan was introduced. Results from its use show that the clinical manifestations of the disease disappear with miraculous speed, and that the general condition of the patient improves under treatment.

Salvarsan has certain disadvantages. It must be given intravenously, which may disturb patients; it is

expensive; and cases of relapse or sudden death may occur during treatment.

Kromayer feels that relapses and accidents occur less often when repeated small doses are given instead of one or two very large doses. A combined mercury and salvarsan cure is the most effective form of treatment. [R. F.]

Obituary.

EDWARD RUSSELL COGSWELL, M.D.

EDWARD RUSSELL COGSWELL, M.D., died at his home in Cambridge, December 22, 1914, aged 73 years. Dr. Cogswell was born at South Berwick, Me., June 1, 1841. He entered Harvard College with the class of 1864, left college in 1862 to serve with the 44th Regiment of Volunteers, Mass. V. M., and was mustered out of the service in June, 1863. He received the degree of M.D. from Harvard in 1867, A.B. as of 1864 in 1871, and A.M. in 1872. He became a Fellow of The Massachusetts Medical Society in 1867 and was transferred to the retired list in 1906.

For eleven years Dr. Cogswell served on the Cambridge School Committee and at the time of his death was president of the Cambridge Savings Bank, a director of the Charles River Trust Company, and a trustee of the Cambridge Hospital.

He is survived by a daughter and by three sons, one of them being also a physician.

Miscellany.

BELGIAN PHYSICIANS' RELIEF FUND.

IN response to an appeal made by Dr. Charles Jacobs of Brussels for aid for civilian physicians, pharmacists and patients in devastated Belgium, a Committee of American Physicians for the aid of the Belgian profession, has been organized. It is composed of the following members:

Victor C. Vaughan, President American Medical Association.
William L. Rodman, President-elect American Medical Association.
John B. Murphy, President Clinical Congress of Surgeons of North America.
Charles H. Mayo, President-elect Clinical Congress of Surgeons of North America.
J. M. T. Finney, President American College of Surgeons.
J. Riddle Goffe, President The Seventh International Congress for Obstetrics and Gynecology.
George H. Simmons, Editor *Journal of the American Medical Association.*
Thomas L. Stedman, Editor of the *Medical Record.*,
Robert M. Green, Editor of the BOSTON MEDICAL AND SURGICAL JOURNAL.
Claude L. Wheeler, Editor of the *New York Medical Journal.*
Franklin H. Martin, Editor of *Surgery, Gynecology and Obstetrics.*
Howard Canning Taylor, New York, N. Y.
Frank F. Simpson, Pittsburgh, Pa.

The officers of this committee are: Dr. Martin, chairman; Dr. Rodman, vice-chairman; Dr. Simpson, treasurer; and Dr. Taylor, secretary.

The names of other physicians will be added to this later. The executive committee consists of:

Dr. Franklin H. Martin, Chairman, 30 North Michigan Boulevard, Chicago, Ill.
Dr. J. Riddle Goffe, 171 W. 71st Street, New York City.
Dr. Howard Canning Taylor, Secretary, 32 W. 50th Street, New York City.
Dr. Frank F. Simpson, Treasurer, 7048 Jenkins Arcade Building, Pittsburgh, Pa.

Cable inquiries are being made to learn direct from Belgium and Holland the most urgent needs of the profession at this time.

The commission for relief in Belgium will deliver supplies as far as war conditions will permit, and without cost to our committee for transportation and delivery in Belgium. Through the medium of the commission for relief in Belgium efforts are being made to standardize boxes of medical supplies for civilians and to perfect diplomatic arrangements permitting their shipment into Belgium. In order to facilitate delivery it has been arranged that all shipments by the Committee of American Physicians will be made in boxes painted *yellow*. This is in conformity with the color scheme adopted by the commission for relief in Belgium which is designed to facilitate the safe passage of articles across the seas, through the various countries they must traverse and to their ultimate destination.

All subscriptions to the fund for the aid of Belgian physicians should be sent in the form of checks or postal orders and should be made payable to Dr. Frank F. Simpson, treasurer. They should be sent to Dr. Frank F. Simpson, 7048 Jenkins Arcade Building, Pittsburg, Pa.

As many signatures are illegible, all checks should be accompanied by a card giving the donor's name and address in typewriting or printing.

The Union Trust Company of Pittsburg has been selected as the depository of the committee. Checks will be promptly deposited and will at once be available for the purchase of supplies by the Executive Committee.

A weekly report of receipts and expenditures will be made by the Treasurer to the members of the committee and through the medium of the medical journals, to the medical profession as well.

The following is the report of the Treasurer of the Committee of American Physicians for

the relief of the Belgian profession, for the week ending December 26, 1914.

Contributions:

Union Trust Company	Banking Facilities
Sterrett & Acheson, Attorneys	Professional Services
F. O.	$ 25.00
F. H. M.	100.00
F. F. S.	100.00
S. P.	25.00
G. C. S.	5.00
S. A.	20.00
E. W.	25.00
B. L.	10.00
T. E. S.	20.00
T. L. S.	25.00
R. S. E.	10.00
M. W. R.	10.00
W. A. P.	25.00
M. C. S.	5.00
Total	$405.00
Disbursements	None

F. F. SIMPSON, M.D., *Treasurer.*

MILITARY NOSTALGIA.

THE issue of the *Lancet* for Nov. 28 presents an interesting editorial account of military nostalgia. The Italians speak familiarly of nostalgia as a disease of recruits, but apparently it has not hitherto been recognized as such by the British.

"Nostalgia as a specific disease especially afflicting recruits has never figured in English textbooks of medicine or mental disease, but our French allies had up to about the year 1877 issued a whole literature on the subject. Switzerland, as we are informed by Jean Jacques Rousseau, was the original home of what was long regarded as a dangerous malady. The Swiss, he asserts, were forbidden to listen to the music of the Ranz-des-Vaches if it happened to be played to them when on the march, since the monotonous strains, associated in their minds with home and the mountains, led to desertions, sickness, and death. Johannes Hofer, a Mulhouse physician, is perhaps the original authority on *mal du pays*, which he calls 'pothopatridalgia.' His book was published in Basle in 1688. He speaks of a specific disease, tells many stories of its extraordinarily fatal results, and transcribes in quaint notation the music of the Ranz-des-Vaches, or Kuh-Reihen, to the sound of which he directly traces his 'pothopatridalgia.' As years pass the picturesque element in home sickness becomes modified, and in 1837 we find the subject treated at great length and with a complete appearance of scientific justice by Paulinier in a Montpellier thesis. He describes the pallor, taciturnity, absolute dejection, loss of appetite, and so forth, which attack the recruit suffering from home sickness, and adds the curious observation that in the great wars of the French Republic the illness was unknown owing to the enthusiasm of the soldiers for France, every inch of which had become home in their regard. Later, when the Napoleonic wars had sapped the vitality of the nation, the condition of *mal du pays* became almost epidemic among the boy recruits of 1812 and the following years. There is little to choose between Paulinier's views and those of many of his successors. They all describe much the same set of symptoms. Writing as lately as February, 1863, an American army surgeon, De Witt C. Peters, speaks of the incidence of this form of melancholia among young recruits drawn from the Eastern States of the Union and sent to fight in the, to them, enervating climate of the South. 'The hospitals of New Orleans,' he says, 'during the past summer were filled with such cases. . . The majority of them were young men from the Eastern states, whose love of home and kindred is a characteristic trait.' His definition of the symptoms tallies with that of his predecessors. The symptoms produced by this aberration of mind are, first, great mental dejection, loss of appetite, indifference to external influences, irregular action of the bowels, and slight hectic fever. As the disease progresses it is attended by hysterical weeping, a dull pain in the head, throbbing of the temporal arteries, anxious expression of the face, watchfulness, and increased fever and wasting. Among young prisoners of war it is the worst complication to be encountered, as the writer can truthfully affirm."

Doubtless, as in all functional psychoses, military nostalgia depends largely on the emotional temperament of the race and of the individual.

EXAMINATION FOR ADMISSION TO AMERICAN COLLEGE OF SURGEONS.

AT the annual meeting of the American College of Surgeons in Washington, D. C., on November 16, the following report was presented by the committee on examination for admission.

"Your committee begs to submit the following tentative scheme for admission to the American College of Surgeons: On and after November 1, 1914, the candidate for admission to the American College of Surgeons, in addition to fulfilling the conditions previously indicated, *i.e.* that he shall have been graduated from a medical school for not less than five years, and shall present evidence of personal probity and specialization in surgical lines, shall be required to lay before the committee on examination:

"1. Evidence that applicant has served at least one year as a hospital interne and three years as assistant, or one year as first assistant to a surgeon of recognized ability and with an adequate hospital service. From those who were graduated before 1915 an equivalent surgical experience shall be acceptable, especial im-

portance being attached to laboratory and research work.

"2. Evidence that he has visited other surgical clinics and laboratories than those to which he has been officially appointed, giving the dates of such visits, the time spent, and a brief summary of the work witnessed or performed.

"3. An abstract of at least fifty consecutive major operations which he has himself performed, this abstract to contain the name and address of the doctor or consultant referring the case; the pre-operative diagnosis; the anesthetic given, by whom, the quantity and the time of administration; the date of operation, and a brief description of it, with a note of the time required for its performance, calculated from the first incision to the beginning of the application of the dressing; the post-operative course, and a mention of complications, if such occurred; not only those conditions usually classed as such, but consecutive bleeding which calls for measures directed toward its control, hematoma of sufficient extent to require evacuation or drainage or suppuration, as slight even as a stitch abscess, are to be regarded as complications. The condition on discharge from the hospital with subsequent course of the case up to the date of application for membership, or as near this as is practicable. The applicant shall supplement his individual report of operations by a further abstract report of at least fifty cases in which he has acted as assistant.

"4. All applicants for fellowship to the American College of Surgeons whose date of graduation is 1920 or later shall be graduates from medical schools which shall have demanded of its matriculates two years of collegiate training, or the equivalent, including biology, chemistry, and physics. If the candidate's school of graduation be not accredited by the American College of Surgeons, he shall be required to pass a technical examination.

"5. Surgeons widely recognized by the profession as leaders of progress and exponents of finished technic, by a unanimous vote of the board of regents may be admitted to fellowship on recommendation of the committee on examination."

THE MEDICAL ASSOCIATION OF THE ISTHMIAN CANAL ZONE.

It is the desire of the Medical Association of the Isthmian Canal Zone to be represented at the Panama-Pacific Exposition, to be held in San Francisco during the year 1915.

It was decided at the November meeting of the Society to hold an extraordinary session at the Exposition some time during the Medical Period, which begins June 13 and ends July 3. The most desirable time appears to be the week beginning June 14, 1915, as this date is near the meeting to be held by the American Society of Tropical Medicine and the meeting of the American Medical Association.

It seems appropriate that our Society should be represented, and it is therefore earnestly requested that all former and present members will endeavor to assemble at San Francisco during that week, and be prepared to support those in charge of the session.

Former members who now live near San Francisco will be asked to take the lead in perfecting the plan, and as soon as the temporary chairman can be appointed, the members are requested to get in early communication with him and express their intentions in regard to attendance, and also offer any suggestions in regard to making the extraordinary session a success.

Due notice will be given as soon as the temporary chairman can be named.

H. C. CLARK, *Secretary-Treasurer.*
Ancon, C. Z

December 16, 1914.

UNITED STATES CIVIL-SERVICE EXAMINATION.

The United States Civil Service Commission announces an open competitive examination for physicians, for men only, on Feb. 3, 1915. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Indian Service at the Hayward School, Wisconsin, at $1,100 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

Applicants must be graduates of or senior students in recognized medical schools. The names of such senior students will not, however, be entered on the eligible register in the event they pass the examination until they have furnished proof of actual graduation.

Persons who meet the requirements and desire this examination should at once apply for Form 1312, stating the title of the examination for which the form is desired, to the United States Civil Service Commission, Washington, D. C. No application will be accepted unless properly executed, including the medical certificate, and filed with the commission at Washington in time to arrange for the examination at the place selected by the applicant. The county officers certificate in the application form need not be executed. The exact title of the examination as given at the head of this announcement should be stated in the application form.

APPOINTMENTS.

On Nov. 23 DR. JOSEPH W. COURTNEY, of Boston, was appointed, by the Massachusetts State Board of Insanity, examiner of insane prisoners, in place of DR. HENRY STEDMAN, who resigned.

On Dec. 23, DR. THOMAS J. BARRETT, of Worcester, Mass., was elected chairman of the Massachusetts State Board of Registration in Dentistry, in place of DR. JOHN F. DOWSLEY, who resigned after a service of twenty years.

SOCIETY NOTICE.

The regular mid-winter meeting of the Middlesex South District Medical Society will be held in the Boston Medical Library at noon on Jan. 13, 1915. Dr. John Lovett Morse, of Boston, "Remarks on Infant Feeding and the Disturbances of Digestion in Infancy."

LYMAN S. HAPGOOD, M.D., *Secretary.*